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A T  
A MEETING of the COUNCIL  
of the  
*ROYAL SOCIETY,*  
*June 23, 1739.*

*THE greatest Part of this Treatise on  
DISSOLVENTS of the STONE; and on  
curing the STONE and GOUT by ALIMENT,  
&c. By THEOPHILUS LOBB, M.D. F.R.S.  
having been read at several MEETINGS of  
the ROYAL SOCIETY, for which he had their  
Thanks; it is ordered, That he be desired to  
print the same.*

HANS SLOANE, P. R. S.

---



A  
**TREATISE**  
 ON  
**DISSOLVENTS of the STONE;**  
 And on CURING the  
**STONE and GOUT**  
 BY  
**ALIMENT.**

S H E W I N G,  
 By REASON supported with EXPERIMENTS,  
 and CASES, the PROBABILITY of *dissolving*  
 the STONE either in the *Kidneys*, or *Bladder* ;  
 and of preventing the Returns of the GOUT  
 by suitable ALIMENT, with proper RULES  
 of DIET.

Intermixed with OBSERVATIONS, which shew  
 how Persons of different *Constitutions*, and also of  
 different *Habits* of Body, whether *too lean*, or *too fat*,  
 should regulate *themselves*, and their *Diet* for the  
 Preservation of their Health.

To which are added,  
 DIRECTIONS of DIET proper for PERSONS afflicted  
 with *Colds*, *Fevers*, *Quinsseys*, *Coughs*, *Asthma's*, *Cholicks*  
 and *Pains* of the *Stomach*, *Costiveness*, *Nervous Diseases*,  
*Cachexies*, *Dropsies*, *Tumours*, or *Scurvey*.

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The WHOLE form'd for USEFULNESS in FAMILIES.

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By THEOPHILUS LOBB, M. D.  
 and Fellow of the ROYAL SOCIETY of LONDON.

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L O N D O N:

Printed for JAMES BUCKLAND, at the *Buck*  
 in *Pater-noster Row*.

MDCCLXXXIX.





T O  
*Sir Hans Sloane, Bart<sup>r</sup>*  
PRESIDENT,

And to the  
COUNCIL and FELLOWS  
OF THE  
ROYAL SOCIETY of *LONDON*,  
For Improving Natural Knowledge.

*Gentlemen,*  
**T**HAT great REPUTA-  
TION which the ROYAL  
SOCIETY of *LONDON*  
has obtained universally thro'  
the learned World by its many  
IMPROVEMENTS in the several  
Branches of *natural* KNOW-  
A 3 LEDGE,

LEDGE, engages the Attention of the Curious, and Learned, not only to all the TRANSACTIONS of this illustrious BODY, but likewise to the Performances of its particular Members; and therefore might well raise in me an Ambition of having Your Approbation of what I offer to the Consideration of the PUBLICK.

IT was with Pleasure I observed, that my Papers on the important Subject of this *Treatise* were to the Satisfaction of such competent, and impartial JUDGES.

THIS encouraged me to proceed



ceed in my Researches with Chearfulness ; and with the Hope, that my Sentiments were well grounded, and that I might be enabled to write something that may be of Service to Persons afflicted either with the STONE, or GOUT.

I thankfully acknowledge my Obligation to our worthy PRESIDENT, whose benevolent Temper, and known Zeal to promote useful Discoveries, inclined him to favour me with a Supply of *Calculi* for making many of my EXPERIMENTS.

I have pursued these Studies with the utmost Diligence my

viii DEDICATION.

other Affairs would allow, and with an ardent Desire of obtaining some Knowledge of Things, which greatly concern the *Ease*, and *Health* of Multitudes of People, but which lay very much in Obscurity, and Darknefs; and I hope the RESULT of my Enquiries may prove in some Measure useful to many.

I am with great Respect,

GENTLEMEN,

*Your most obedient,*


*humble Servant,*

THEOPHILUS LOBB.





# THE PREFACE.

§. 1.  *HERE* needs, I apprehend, no Apology for a Man's publishing what he has Reason to believe will be useful to his Fellow-Creatures ; and therefore I shall make none for the Publication of this Treatise.

§. 2. *The World indeed abounds with Books, but yet there are so many Things we remain ignorant of, and so many Subjects we very imperfectly understand, that there is Matter enough for Study, and useful Treatises, thro' a long Course of succeeding Ages.*

§. 3.



§. 3. *Many Books are published, which contain but little more, than what has been again, and again before printed; and they, who read them, often on that Account, meet with Disappointment. I hope it will not happen so to those, who shall peruse these Papers.*

§. 4. *The principal Notions communicated in them, so far as I know, are entirely new; and my Reader will judge whether they are built on a solid Foundation, and are like to be of any Service to Mankind.*

§. 5. *The Manner in which I came to entertain the Opinion, that the STONE, and GOUT may be cured by suitable Aliment, may be seen in the following Papers: But till the latter End of May, or Beginning of June, 1738, I always thought the DISSOLVING a Stone in either of the Kidneys, or Bladder, to be a Thing absolutely impossible.*

§. 6. *While I lived at YEOVIL in Somersetshire, where the Water is petrifying, I had several terrible Fits of the Stone; and the melancholly Apprehensions of having that Distemper continually increasing, made me very thoughtful, and studious on the Subject. I read Books, but did not meet with any Thing that could dissolve a Calculus out of the Body,*  
and

*and which might be safely taken into it : Neither was I able to contrive a Medicine likely to produce such an happy Effect.*

§. 7. *If any effectual DISSOLVENT of the Stone could be found out, which a Man might take with Safety, yet, (as it would; when received into the Stomach, mix, and be diluted first with the Contents of it, then with the Contents of the Bowels, and afterwards with the whole Mass of Blood) I thought, that the dissolvent Force of it would be entirely lost before any Particles of it could pass into the Kidneys, and Bladder ; and therefore never expected, that any Method would ever be found out able to cure Persons of this painful Distemper.*

§. 8. *BUT about the Time mention'd, (§. 5.) as I was musing on this Subject, it came into my mind, that surely the STONE derives its Origin from some Things, or other, taken into the Stomach as ALIMENT ; and then I thought, why may not other Things of a contrary Nature, taken as ALIMENT, be effectual to dissolve it ?*

§. 9. *Thus (§. 8.) began that Series of COGITATIONS, which led me to make the Experiments herewith published, and which obliged*



*obliged me with Pleasure to give up the Notions (§. 7.) I had long entertain'd, and to embrace the Opinions inculcated in this Treatise.*

§. 10. BUT how came these Thoughts (§. 8.) into my Mind? *It is a Question that has been put to me; and a Question it is, which deserves an Answer.*

§. 11. *In Reply to it, therefore, I must own, that I think it owing to that good God, who teacheth Man Knowledge (a).*

§. 12. *As to the PLOWMAN, in the prudent Management of his Husbandry, the Word of the LORD hath said, his God doth instruct to Discretion, and doth teach him (b). And doubtless the ALMIGHTY is as much the Instructor of every one, who successfully seeks after useful Knowledge. Every good Gift is from above, and cometh down from the Father of Lights (c).*

§. 13. REASON as well as Revelation convinces me, that when a Man obtains any useful Discoveries, he should acknowledge GOD, as the Author of them, and ascribe unto Him

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(a) Psal. xciv. 10. (b) Isa. xxviii. 26. (c) James i. 17.



*the Praise, and Glory, to whom alone they belong.*

§. 14. *When I first enter'd on these Researches, I apprehended that the Production of the Stone in human Bodies was chiefly owing to the drinking Wine, in Places where the Water is not petrifying; but the Event of the Experiments made with Wine, &c. and further Consideration, obliged me to part with that, and some other Opinions, and to entertain different Sentiments.*

§. 15. *I did not think it proper to alter those Sections in which they are related, that my Reader may see in what Manner, and on what Grounds I have received my present Sentiments; and how ready I am to part with any Notions, where Experiments, and Reason convince me that they are Mistakes.*

§. 16. *In the Course of my Experiments, and Searches after the Nature of our Aliments, it has appear'd to me, that animal Food, and the Neglect of Exercise, are the principal Causes both of the Stone, and Gout; and I think, they are so, of most other chronical Diseases: But, I grant, that the Stone may be produced without animal Food; because there are alkaline animal Salts, and animal Oil in*  
*all .*

*all human Bodies; and because the Salts, and Oils of Vegetables taken into the Body as Food, may, by circulating with the Blood, be transmuted into the Nature of animal Salts, and animal Oil.*

§. 17. *A GENTLEMAN, who has lived many Years on a vegetable Diet, and has of late been afflicted with nephritick Complaints, and voided several small Calculi, told me, that he never had any Symptom of the Stone till after he had lived about eight Years on the vegetable Diet.*

§. 18. *From this Case (§. 17.) it seems reasonable to infer, that either the Water, or some of the Vegetables this Gentleman used as Aliment, have a petrifying Quality, which has been communicated to his Urine.*

§. 19. *I would take Occasion hence (§. 21.) to advise FAMILIES to have their Tea-Kettles examined; and, if they are incrustrated with a stony Matter, to have them well cleansed from it, and to try different Sorts of Water, till they find, which (within their Reach) has least of a petrifying Quality, and then to prefer that for their Use. I apprehend that Pump, and Well Water have the most of it, and that River Water is freer from it.*

§. 20.



§. 20. *Some VEGETABLES, it may be, have a petrifying Quality, tho' I cannot affirm it of any; and there may be something in the Frame, and Make of some Bodies, conducive to promote the uniting, and cohering of the animal, alkaline Salts, and Oil, &c. to the Formation of a Calculus, either in the Kidneys, or Bladder, or elsewhere: But however this may be, there is Reason to hope, that wherever in the human Body a Calculus is form'd, some or other of the Dissolvents may be able, with the divine Blessing, to destroy the Cohesion of its Parts.*

§. 21. *When I had gone thro' the SUBJECT of the Stone, and Gout, it appear'd to me, that the dissolvent Aliments might, with proper Directions about the Use of them, become very conducive to the Cure of many other Distempers: And for this Reason, I have added RULES of DIET in Cases of Colds, Fevers, Quinseys, Coughs, Asthma's, Cholicks, and Pains of the Stomach, Costiveness, nervous Diseases, Cachexy, or Green Sickness, Dropsies, Tumours, and Scurvey: But proper Medicines should not be neglected in these Distempers.*

§. 22. *SICK PERSONS should consult their PHYSICIAN, and they may well hope for a more speedy Recovery, when they have the Assistance*



*stance both of fit Medicines, and suitable Aliment.*

§. 23. *I had Thoughts of adding other Things about the Use of some Aliments, on which I have made no Remarks ; but the Bulk to which this Treatise is swell'd, restrain'd me from it, and obliges me to conclude this Preface, after I have acquainted my Reader with the following Particulars, viz.*

§. 24. *That all the Papers relating to the Probability of curing the Stone by suitable Aliment, and those of curing the Gout by the like Means, with the Letters from the Rev. Mr. Sleigh, and Mr. Denham, were read at several Meetings of the ROYAL SOCIETY, with Remarks on them ; and that upon the Reading the Cases of those Gentlemen, the Rev. Dr. Desaguliers gave the ROYAL SOCIETY viva voce a Relation of his own Case, and afterwards obliged me with a more particular Account of it in a Letter, which is printed in its proper Place. Many of the Experiments were also read ; but the others, and the Observations on spirituous Liquors, and the Rules of Diet were not read, because there was not Opportunity for it.*

Bagnio Court in New-  
gate-street, London.

T H E

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T H E  
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ADVER-

## ADVERTISEMENT.

*The following BOOKS have been lately published by Dr. LOBB.*

I. **A** Treatise on the SMALL POX. In two Parts. Part I. containing an Account both of the *distinct* and *confluent* Kind, their various *Symptoms*, the *curative Indications*; and of the METHODS of managing the Sick, as to *Diet*, *Medicines*, &c. To which are added, Answers to the Arguments for Bleeding in this Disease; and *Proofs* of the *Probability* of curing it in the *febrile* State, so as to prevent the Eruption, &c.

Part II. Exhibiting *fifty* HISTORIES, in which this *Disease*, and its various Symptoms, are exemplified; and a DISSERTATION on the Management of *young Children* under it; with a METHOD of *external* Remedies for those, who will not take *internal* Medicines. London, printed 1731.

The learned Dr. BOERHAAVE gave his Opinion of this *Book* in the following Words; which with his Consent has been printed, and prefixed to the printed Copies of it.

*Librum de Variolis, Anglicè, conscriptum à Domino Theophilo Lobb, M. D. & R. S. S. perlegi, probaviq; nam plenum vidi veræ Scientiæ medicæ, promittentemque Genti humanæ Bona plurima.*

Leydæ, 17<sup>12</sup>33. Hermannus Boerhaave.



2. RATIONAL METHODS of curing FEVERS, &c. Together with a particular Account of the EFFECTS of artificial EVACUATIONS by *Bleeding, Vomiting, Purging, Sweating, Blistering, &c.* With practical RULES deduced from them; shewing in what CASES they are *proper*, and in what they are *improper*. London, printed 1734.

3. MEDICAL PRACTICE in curing FEVERS correspondent to *Rational Methods, &c.* exemplified in many CASES of the most usual FEVERS, with the Medicines by which they were cured. London, printed 1735.

4. A *Practical Treatise* of PAINFUL DISTEMPERS, with some effectual Methods of curing them, exemplified in a great Variety of suitable Histories. London, printed 1739.

N. B. In this *Treatise* Pains of the Head, Teeth, Eyes, Heart, Breast, Sides, Back, Stomach, and Bowels: Likewise of the Stone, Strangury, After-Pains, Piles, Cramps, Rheumatism, and Gout, &c. are particularly consider'd and exemplified.

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E R R A T A.

In §. 312, line 2. instead of *weightng*, read *weighing*.  
§. 338. l. 2. instead of 387, r. 337. §. 339. l. 1. instead of *Obs. 2. r. Obs. 3.* §. 343. l. 2. instead of *Piecces*, r. *Pieces*.  
§. 389. l. 1. instead of 1738-9, r. 1738. Page 119. l. 5. instead of §. 295, r. 405. — l. 2. instead of *appears*, r. *appear*.  
§. 438. l. 5. instead of 9, r. 11. §. 624. l. 1. instead of 619, r. 618. §. 710. l. 1. instead of 689, r. 698.  
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A  
TREATISE  
ON  
DISSOLVENTS of STONES, &c.

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CHAPTER I.

*Containing some Reasons for apprehending, that among the Sorts of Aliment in common Use, some have a Quality dissolvent of the CALCULUS; and an Account of Experiments made with the Juice of Limons on some fossile Stones, in a Letter to Sir Hans Sloane, Bart. President of the ROYAL SOCIETY: Likewise a Letter to Dr. Mortimer, Secretary to the Royal Society, relating to those Experiments.*

S I R,

§. I. **E**VERY Person is sensible of the vast Importance of finding out Medicines, which are safe for a Patient to take, and which may be advised

B

with

with a Probability of dissolving a *STONE* in the *Kidneys* or *Bladder* : And may I not say the Knowledge already obtained by the Experiments made by Mr. *Boyle*, Dr. *Grew*, Dr. *Slare*, and Dr. *Hales*, will conduce, not a little, to this desirable End ; since by them we understand very much of the Nature or Contexture of the human *Calculus*.

§. 2. The EXPERIMENTS of those GENTLEMEN very plainly prove, that the human *Calculus* consists of a very large Quantity of *Air*, with a good Quantity of a volatile *alkaline Salt*, some *Oil*, and a little *Earth*, or *Caput Mortuum*.

§. 3. How the Particles of the *Air*, of the *alkaline Salt*, of the *Oil*, and *Earth*, come to unite so closely, and cohere so firmly together, as to form such a solid Concretion as the human *Calculus*, is a Point, which perhaps may not easily, or very soon be explain'd. It is of greater Moment to find out MEDICINES, the Particles of which may attract the component Particles of the *Calculus* more strongly than they attract one another ; or which may some how dissolve that Union, which keeps together the Particles of such different Substances as compose it ; and a much greater Blessing will it be

be to the World, if any Sorts of our ALIMENT be found capable of producing such Effects.

§. 4. The great Benefit that will accrue to Mankind from the DISCOVERY of such MEDICINES, as it engaged others, so it has inclined me to seek it in the Way of making Experiments; and also to try whether I might not find out ALIMENTS, by which the same happy Ends may be accomplished.

§. 5. I consider'd, that in Countries where the Water is not petrifying, the *Calculus* is generated, or produced chiefly in Bodies used to drink Wine; and that among the great Numbers of Persons whom Dr. *Cyprianus* cut for the Stone, there were very few but what were Wine-Drinkers.

§. 6. I likewise consider'd, that in *Spain*, *Italy*, and other Countries, where Wine, and Wine with Water is the common Drink of People, tho' many of them may be afflicted with *nephritick* Diseases, yet that those Diseases must have been abundantly more frequent in those Countries, if there was not something in Use among the Inhabitants of them, which either hindred the Particles of *elastick Air*, *alkaline Salts*, *animal Oil*, and *Earth*, from uniting into Stone-like Concretions; or which dissol-



4 *The Probability of discovering, &c.*

ved the Texture of such Concretions, when they happen'd.

§. 7. And since it has been demonstrated that the human CALCULUS is an *alkaline Concretion*, the Considerations mentioned made me think the Remedy divine Providence has furnished the Inhabitants of the Wine Countries with, and brought into their Use, is some *acid*, or acescent Vegetable; and inclined me to try what Effects might be produced by the Juice of *Lemons*; a Fruit very plentiful in several Wine Countries. Accordingly I have begun to make Experiments with it, and hope it will not be disagreeable to the *Royal Society* to see the Result of some of them: And more hereafter may be communicated, if acceptable, from,

S I R,

Your very humble Servant.

*June 15, 1738.*

*An Account of some Experiments made with  
the Juice of Limons.*

EXPERIMENT I.

§. 8. *June* 10. 1738, about Four o'Clock in the Afternoon, I put into the Glafs A. a Stone *Marble*, weighing one Drachm, wanting six Grains, Juice of *Lemons* two Ounces, and two Drachms.

§. 9. In a very few Minutes, *Air-Bubbles* rose from the Marble to the Surface of the Fluid, and made a Froth, which soon cover'd it. The Air-Bubbles very sensibly increased in Number, and ascended continually in great Abundance for many Hours; and Particles of Stone were continually separating from the main Body of it, which spread over the Bottom of the Glafs in the Form of a fine, white, and light Powder; and within 30 Hours the Stone was dissolved, except a small Lump, which appear'd white.

EXPERIMENT 2.

§. 10. *June* 14, about Nine o'Clock in the Forenoon, I put into the Glafs B. a  
B 3 Frag.

6      *Experiments with the Juice of*

Fragment of the *Portland Free-stone*, weighing one Drachm and 19 Grains, Juice of *Lemons* two Ounces.

§. 11. In a few Minutes *Air-Bubbles*, which sensibly multiplied, rose from the Stone, and made a very large Froth on the Surface of the Liquor, about three Quarters of an Inch high. The Air-Bubbles continued briskly ascending, and the Particles of the Stone separating one from another; and the Whole seemed to be dissolved before Two o'Clock in the Afternoon; that is within the Space of Five Hours. The Particles of the Stone, as they separated, spread on the Bottom of the Glass in the Form of a very subtile white Powder.

E X P E R I M E N T   3.

§. 12. *June* 14, about Nine o'Clock in the Forenoon, I put into the Glass C. a Fragment of *white Marble*, weighing one Drachm and one Grain; Juice of *Lemons* two Ounces.

§. 13. AIR-BUBBLES very soon arose from the Stone, and produced the like Froth and Appearances, as in the second Experiment,  
only



only the Dissolution here took up near 24 Hours.

#### EXPERIMENT 4.

§. 14. The same Day about Two o'Clock in the Afternoon, I put into the Glafs D. an *alabaster Marble*, in Colour white and red, weighing one Drachm wanting six Grains; Juice of *Limens* two Ounces.

§. 15. AIR-BUBBLES soon began to rise from the Marble, and ascended in great Quantities, and produced the like Froth as in the two last Experiments; a thick viscid Froth, similar to what arises to the Surface of the Liquor in making Raisin Wine. In this Experiment I observed, that the red Part of the Stone dissolved faster than the white.

§. 16. From these EXPERIMENTS we may observe,

1. That a large Quantity of *Air* goes into the Structure of the *Portland Free-stone*, *Marble*, *Alabaster*, and the *Marbles*, which Boys play with.

2. That the Dissolution of the Stones

mentioned, seems to be accomplished by the *acid* Particles of the Juice of *Lemons* destroying the Union, which was between the Particles of the Air, and the other constituent Parts of the several Stones. Whence it appears probable, that those Particles of Air were as Bands of Union to the other constituent Parts of the several Stones.

§. 17. I have not yet had the Opportunity of pursuing my Design of trying what the Juice of *Lemons* will do on the human *Calculus*; but would remark, that since the two principal, and much the largest Parts of the *Calculus* are an *alkaline Salt*, and *Air*, it appears reasonable to hope, that such a Way of using the Juice of *Lemons* may be found out, as will contribute to the important End of relieving Persons afflicted with the Stone.

§. 18. Only I would observe, that if the Juice of *Lemons*, or any other Thing should be found capable of dissolving the *Calculus* in as short a Time as the Stones mentioned in my Experiments, were dissolved; and if it could be without any corroding of the Membranes of the Bladder, yet such a speedy Solution of the *Calculus* in a living Body  
must

must never be attempted on the Account of the vast Quantity of *clastick Air*, which is put into a State of Activity by the Dissolution of such Concretions.

To Dr. Cromwell Mortimer.

S I R,

§. 19. **I** Have Occasion to observe some Things relating to those Experiments; the Account of which was read to the *Royal Society* the 15th of *June* last, viz.

1. That altho' in each Glais there was such a Quantity of a white, and exceeding fine Powder, which were the Particles of the several Stones separated by the Juice of Limons; yet that the next Day, when I emptied those Glassses, there was a Remainder of each Stone not dissolved.

2. That by putting fresh Juice of *Lemons* to them, they totally dissolved, except a small Piece of the *Portland Free-stone*; the Glais in which it stood being by some Accident thrown down, and the Fragment neglected.

§. 20. I hope the next Week to begin giving an Account of the EXPERIMENTS I have



have made for finding out Things which may dissolve the Stone either in the Kidneys or Bladder; and most of my Tryals have been made with Things in common Use as Aliment; and the Discoveries I have already met with, afford me a pleasing Prospect of obtaining more, which may be improved to the great Benefit of Mankind.

I am,

*S I R,*

*Oct.* 26.      Your very humble Servant.

1738.

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C H A P.

## C H A P. II.

*Containing some Arguments shewing the Probability of obtaining a Dissolution of STONES in the Kidneys and Bladder, by suitable Aliment, in a Letter to Sir Hans Sloane, Bart. President of the ROYAL SOCIETY.*

S I R,

§. 21. **S**INCE the Adjournment of the ROYAL SOCIETY, I have made many *Experiments* to find out DISSOLVENTS of the *Calculus* in human Bodies, and, I can say, not altogether without Success.

§. 22. Those Discoveries have occurred to me in several of my Experiments, which equally surprized, and pleased me; and are a great Encouragement to go on in the same Way wherein I have begun my Enquiries.

§. 23. In my Papers read to the *Royal Society* the 15th of *June* last, I mentioned those Considerations, which first induced  
me

me to think that the all-wise, and good Creator of all Things had made some of the Sorts of common *Aliment* with a *Quality dissolvent* of those calculous, or Stone-like Concretions, which so often happen in human Bodies, tho' we knew not which of them have it ; and the DISCOVERY of them appears to me every Day more probable from the Experiments I have made, because I have already found the happy *Dissolvent* Quality in several of the Sorts of Aliment I have tried ; and the more I consider this *Subject*, the more Reasons occur to my Thoughts in Confirmation of my Opinion ; and incline me to hope, that the *Stone* in human Bodies may be dissolved in the regular Use of suitable Aliment.

§. 24. By ALIMENT I mean all Things that are received into the Stomach for Nourishment, or Refreshment, whether they are liquid, or solid.

§. 25. I propose to shew the PROBABILITY of *dissolving* the Stone in human Bodies, by Means of Things taken into the Stomach as Aliment ; then to relate my EXPERIMENTS with Observations from them ; and after I have made a sufficient  
Number



Number of Experiments with *Calculi*, and various Sorts of Aliment, I shall endeavour to deduce from them RULES of *Diet*, in the regular Observation of which, Persons afflicted with the Stone may, with the divine Blessing, become free from it.

§. 26. And if it shall please God, the Fountain of Knowledge, and Wisdom, to enable me to perform these Things, to the Satisfaction of this learned and judicious Society, I shall then apprehend, that I have done a considerable Piece of Service for the Good of Mankind; which is the Point I aim at.

§. 27. The PROBABILITY of dissolving the STONE, either in the Kidneys or Bladder, by Means of Things received into the Stomach as *Aliment*, will, I think, appear from the following Considerations, *viz.*

*Prop. 1.* That the constituent Parts of the human *Calculus* are these four, *viz.* an alkaline *Salt*, *Air*, *Oil*, and *Earth*; the two former of which make far the greatest Part of the Stone, either in the Kidneys or Bladder; the Proportion of the *Oil* being little, and that of the *Earth* much less.

§. 28. This Proposition is grounded on the

the Experiments referred to [in my former Papers,] §. 1.

*Prop. 2.* That the constituent Parts of the *Calculus* exist in all human Bodies; that is, alkaline *Salts*, *Air*, *Oil*, and *Earth*: But in a Time of Health, they are only in such Proportions as render them useful in the animal Oeconomy.

*Prop. 3.* The constituent Parts of the human *Calculus* are *too abundant* in Persons afflicted with the Stone; and likewise in those, who are troubled with the *Gout*; the *tophaceous Matter* excreted at the Joints of some gouty Bodies, and the *Calculus* having the same constituent, or component Parts, tho' with a Difference in the Proportions of one Sort of Particles to the other.

*Prop. 4.* That the first Formation of a *Calculus* either in the Kidneys, or the Bladder, and every Addition to it, or increase of its Bulk, is by Particles of alkaline *Salts*, *Air*, *Oil*, and *Earth* derived from the Blood, and brought down the excretory, *urinary* Ducts with the Urine flowing from the Blood thro' each Kidney, its *Pelvis*, and Ureter into the Bladder.

*Prop. 5.* That the Blood is replenished  
with

with the alkaline *Salts*, *Air*, *Oil* and *Earth*, by Means of some of the *Ingesta*, or Things taken into the Stomach as Aliment.

§. 29. Here it deserves Notice, that not only Food replete with *alkaline Salts*, such as the Flesh of all Animals, whether of *Air*, *Land*, or *Water*, but *WINE* on the Account of its *Tartar*, (which, tho' *acid*, looses its acid Properties, and becomes *alkaline* before it comes into the Blood, or immediately on its Mixture with it) are a Sort of *Pabulum* for calculous Concretions.

*Prop. 6.* That *alkaline* and *alkalescent* Aliments, used to a certain Degree, do communicate (what I think may be fitly called) a *petrifying Quality* to the Urine of such Persons.

§. 30. The Truth of this *Proposition* (§. 29.) is manifest from the Production of *Calculi* in such Bodies, and the Increase of their Bulk.

§. 31. *Prop. 7.* That as the *Calculus* is produced and increased in Bulk by Means of alkaline and alkalescent Things received into the Stomach, so it seems reasonable to think it it may be *diminished* in Bulk, that is, gradually dissolved, by Means of other Things,



Things, Things of a contrary Quality received into the Stomach.

§. 32. The Truth of this §. 31. appeared to me by considering the following Propositions, *viz.*

*Prop. 1.* That the *Urine* of Persons may receive *Qualities* from the Things they take into their Stomachs.

§. 33. The Truth of this Proposition is evident from §. 30, and from the sensible Effects, or from those sensible Qualities of the Urine, which are the Effects of eating *Asparagus*, and taking Medicines of the *Turpentine* Kind.

§. 34. Other Instances may be produced, but these prove not only that Qualities may be communicated to the Urine by Things taken into the Stomach, but likewise, that different Qualities may be imparted to the Urine, according to the different Nature of the Things received into the Stomach; which appears from the *different Smells*, which the Urine has after receiving into the Stomach the Things above-mentioned.

§. 35. *Prop. 2.* That if a Quality dissolvent of the *Calculus* can be communicated to the Urine, by Means of Things taken into the Stomach,

Stomach, then may the *Calculus*, either in the Kidneys or the Bladder, be dissolved.

Because then the *Urine* will be a *dissolvent Liquor*; and as it will be continually washing first the *Calculi* in the Kidneys, and then those in the Bladder; so we have hereby good Reason to hope, that these Concretions, which occasion so much Pain, may be gradually and perfectly dissolved.

*Prop. 3.* That there are divers *Vegetables* in frequent Use as Aliment, which will dissolve the *Calculus* out of the Body.

The Truth of this *Proposition* will appear from my *Experiments*; and I may infer from it,

*Prop. 4.* That there is therefore Ground to think a *Quality dissolvent* of the *Calculus*, may be communicated to the *Urine* of Persons afflicted with the Stone, by proper Things taken into the Stomach as Aliment.

§. 36. And for my own Part, I cannot conceive any Reason, why a *dissolvent Quality* may not be communicated to the URINE, by some Things taken as Aliment into the Stomach, as well as a *petrifying Quality* imparted to it by other Things used as Aliment. *Vid. Prop. 6. §. 29*

§. 37. I hope what has been observed is sufficient to evince the PROBABILITY of dissolving the STONE by *suitable Aliment* : I shall only add, that I have herewith deliver'd an Account of some of my Experiments, and am with great Esteem,

*S I R,*

Oct. 31.      Your obedient, humble Servant.

1738.



## C H A P. III.

*Containing an Account of Experiments made with Calculi, and the Juice of Limons ; with some Observations arising from them.*

## E X P E R I M E N T I.

§. 38. *JULY* 27, 1738, I put the Fragment of a *Calculus*, weighing ten Grains, into a Mixture made with two Ounces of the *Juice* of LIMONS, and one Ounce of Honey, and left them to stand without Heat, or Motion.

*August* 5, I looked on the Mixture, and observed, that the *Calculus* (which for the first Days lay at the Bottom) was risen to the Top, and swam on the Surface of the Mixture, as a Sun Raisin will after it has lain a while in Water.

*August* 7, I looked again on the Mixture; and observed the *Calculus* to be divided into three Parts ; two small ones which swam on

the Surface of the Liquor, and a large one, which was sunk to the Bottom of it.

*August* 24, I viewed the Mixture again; the divided Parts retained their former Appearance: I then pour'd the Mixture out, and separated the Liquor from the divided Parts of the *Calculus*; and when I went to feel them, they were as soft as *Jelly*.

The *Calculus* 28 Days in the *Menstruum*.

## EXPERIMENT II.

§. 39. *July* 27, I put the Fragment of a *Calculus* weighing four Grains, into a Mixture of about two Ounces of PUNCH (made with the common Proportions of *Water Limon Juice* and *Brandy*) and half an Ounce of Honey.

*August* 24, I examined it, and found it so soft, that by gently pressing it between my Fingers, it broke into many Pieces.

In Digestion 28 Days.

## EXPERIMENT III.

§. 40. The same Day (§. 39.) I put a *Calculus* weighing fourteen Grains into three Ounces of the same PUNCH.

*August*

*August* 28, I examined it, and found it *softer*; small Pieces easily separated from it by the handling of it; and more did so, when dropt again into the Phial.

*September* 18, I examined it again; it had the same Appearance to View, as when I look'd on it *August* 28; but putting the End of a Pen gently to it, (that had the Knib cut off) to try whether it was hard, it divided into two Parts, and those Parts divided again upon putting the Pen gently against them.

It stood about 5 Hours in a warm Digestion of 96 Degrees of Heat, (by one of *Prince's* Mercurial Thermometers, made in the Manner of *Farrenheit's*) nearly the Heat of the Blood.

*September* 27, I examined it again, and found the *Calculus* more divided into small, and, in Appearance, into rough Pieces, which I found easily compressible into less with my Finger.

In Digestion 62 Days.

#### EXPERIMENT IV.

§. 41. *July* 31, I put the Fragment of a *Calculus* weighing 10 Grains, into two Ounces of the *Juice of LIMONS*.



It had a warm Digestion about five Hours, as the last.

*August 24*, I examined it; to View it appear'd whole, but stuck to the Side of the Glass into which I pour'd off the Juice; and when I went to feel it, found it as soft as a Lump of Jelly, or thick Pap, and had nothing gritty in it.

In Digestion 24 Days.

## EXPERIMENT V.

§. 42. *August 1*, I put a *Calculus* weighing seven Grains into two Ounces of the *Juice of LIMONS*.

*August 28*, I examined it, and found it hard; but a little Piece broke off from it, which was rub'd pretty easily into a fine Powder between my Fingers.

*October 23*. I examined it again, and found it remain'd hard.

In Digestion 84 Days.

## EXPERIMENT VI.

§. 43. *August 1*, I put a *Calculus* weighing sixteen Grains into three Ounces of the *Juice of LIMONS*.

*August*

*August* 28, I examined it, and took it, with a *Forceps*, out of the Juice, the outer *Lamin* or Shell broke into Pieces, and the inner Part softer than in its natural State, I put it into the same Juice again.

*September* 18, I examined it again, and found it broke into more Pieces; but they felt hard, tho' not so hard as before they were put into the Juice.

*September* 30, I examined it again, and found it divided into more Parts, which were softer, and could pretty easily be press'd into a Sand between my Fingers: Then I put to it fresh Juice of *Lemons* three Ounces.

*October* 23, I examined the *Calculus* again, and found it more dissolved, and the Pieces that remain'd undissolved, gently touching them seem'd to have a Hardness; but pretty easily were rub'd between my Fingers into a gritty Matter like large Sand.

In Digestion 83 Days.

## EXPERIMENT VII.

§. 44. *September* 9, I put a Fragment of a *Calculus* weighing 8 Grains and a Half into two Ounces of the *Juice of LIMONS*.

*September 18*, I examin'd it ; it was divided into five Parts, two of them pretty large, and three lesser ; when I felt of them, they felt like so many little Lumps of thick Pap or Jelly, and had nothing gritty in them.  
In Digestion 9 Days.

### EXPERIMENT VIII.

§. 45. *September 30*, I put a *Calculus* weighing one Drachm, and six Grains, into three Ounces of the *Juice* of LIMONS.

*October 23*, I examin'd it, and found the outer *Lamin*, or Shell in part separated, and likewise a small Part of an under *Lamin* ; and the Whole was so much softned, that a Pin was easily thrust into it.

In Digestion 23 Days.

§. 46. There are divers Things worthy of Notice from these Experiments ; particularly,

*Obs. 1.* That there is a great Difference between the Dissolution of the *fossile Stones* mentioned in my former Papers, and *Stones* taken out of human Bodies, tho' made by the same *Menstruum*. E. g.

1. In



1. In the Dissolution of the former Sort, *Air-Bubbles* rose continually in great Abundance from the dissolving Stones; and a considerable and permanent Froth was raised on the Surface of the *Menstruum*; but it happen'd otherwise in the Dissolution of the *Calculi*: There were no *Air-Bubbles* to be seen, except a few mention'd in the first Experiment; nor any Froth appear'd on the Surface of the *Menstruum*.

2. In the Dissolution of the *fossile* Stones, as the Particles of the Air were separated from them, so the other Parts of those Concretes fell asunder, diffused themselves in the *Menstruum*, and spread the whole Substance of it from the Bottom upwards, higher and higher, as the Quantity of the separated Parts increased: it happen'd otherwise in the Experiments now related; for the *Calculi*, which were most thoroughly dissolved, and dissolved into the minutest Parts, did nearly retain the same Appearance as to Bulk, and Colour, till they were felt; and then it was found, that the Cohesion of their Parts was destroyed.

§. 47. Some Questions may here arise, *viz.* That since AIR makes a considerable Part of  
the

the human *Calculus*, as well as of those *fossile* Stones experimented with the Juice of *Lemons*, how it comes to pass, that the Particles of the *Calculus* dissolved did not diffuse themselves in the *Menstruum*; and that *Air-Bubbles*, and *Froth* did not appear as in the Solution of those Fossiles.

§. 48. In order to attain the right Solution of this Difficulty, we must consider, that altho' both Sorts of Stones have *Air* for one of their component Parts, and herein are similar; yet as to their other component Parts, they widely differ; the *Calculus* having *alkaline animal Salts*, and *Oil*, for some of its component Parts, which the other Stones have not; and very likely the Particles of *animal Oil*, intermixed with the *alkaline Salts*, and *Earth*, in the Contexture of a *Calculus*, may keep the Particles of those Parts of it from diffusing in the *Menstruum* in the Manner that the solid Parts of the *fossile* Stones did, when the Air was separated from them: And the Mixture of the animal *Oil* with the other Parts of the *Calculus*, may likewise be the Reason, why the *Air* passes from it in such minute Particles, as not to make Bubbles obvious to our Sight.

§. 49. *Obs.* 2. Fromt he MANNER in which  
the



the Stones taken out of human Bodies, dissolve, we may infer, that there is no Reason to be afraid of using those *Aliments*, or *Medicines*, when found out, which will communicate a *dissolvent Quality* to the Urine, and procure a Dissolution of the *Calculus*; I say that there is no Reason to be afraid, on the Account of the *Air*, which separates from the *Calculus*, when dissolving.

1. Because the Air in the Dissolution of the *Calculus* does not separate so hastily, or in such Quantities, as to produce visible *Air-Bubbles*, as it did in the Solution of those fossile Stones, which have been dissolved (*Chap. I.*) And, 2. Because the *Air*, which will separate from the *Calculus*, if dissolving either in the Kidneys or Bladder, will by the Action of the Kidneys and Bladder, be impelled into the Urine; consequently into a *latent State*, (as all Air is, that mixes with any Liquor) and so be passed out of the Body with the Urine.

§. 50. *Obs.* 3. That some *Calculi* are more hard to be dissolved than others.

This Observation will be evident from comparing Experiment V. (in which the *Calculus* in great Part remained hard, after it had stood in the *Menstruum* about 84 Days)



Days) with Experiment IV, in which a larger *Calculus* became as soft as Jelly, though it stood in the *Menstruum* no more than 24 Days.

§. 51. As the constituent Parts of every *Calculus* are the same, *viz.* alkaline *Salts*, *Air*, *Oil*, and *Earth*; so the Difference as to *Hardness*, and Difficulty of Solution only can arise from the Difference in the Force of the Cohesion of the component Parts of the different *Calculi*; and that Difference in the Force of Cohesion probably results from the different Proportion of the *animal Oil* in the *Calculi*; and the Stones which have the greatest Share of it, very likely are harder to be dissolved, than those which have a less: Likewise those *Calculi*, which are the Effects of Wine-drinking, I take to be harder than many other *Calculi*; because the *Tartar* of Wine, when the Particles of it come to attract each other, to unite and cohere, do make a Sort of stoney Concretions hard to be dissolved.

§. 52. *Obs.* 4. That some *Calculi* dissolve into a soft, smooth Substance like *Jelly*, as in Experiments I, IV, VII; others into a  
*gritty*.

*gritty* Substance like Sand, as in Experiment II, III, VI.

§. 53. *Obs.* 5. That Juice of *Lemons* will dissolve several Stones taken out of human Bodies.

This is evident from Experiment IV, VI, VII.

§. 54. *Obs.* 6. The Juice of *Lemons* will not dissolve all Sorts of *Calculi*.

This appears from Experiment V.

§. 55. *Obs.* 7. That the Juice of *Lemons* and *Honey* mixed together, will well dissolve the *Calculus*.

This is manifest from Experiment I.

§. 56. *Obs.* 8. That *Punch* mixed with *Honey* will dissolve the *Calculus*.

This may be seen in Experiment II.

§. 57. *Obs.* 9. That *Punch* without *Honey* contributes to the Dissolution of the *Calculus*.

This may justly be infer'd from Experiment III.

§. 58. *Obs.* 10. That the Juice of *Lemons* alone dissolves the *Calculi* better than when mixed with *Honey*, or in *Punch*.

As will be evident by comparing Experiment IV, VII, with Experiment I, II, III.

§. 59. *Obs.* 11. That the Juice of *Lemons* with

with *Honey* dissolves the *Calculus* better than the Mixture of *Honey*, and *Punch*, or than *Punch* alone, as will appear by comparing Experiment I. with Experiment II, III.

§. 60. *Obs.* 12. That *Punch* with *Honey* added to it, dissolves the *Calculus* almost in Half the Time that *Punch* will do it without the *Honey*.

As may be seen by comparing Experiment II. with Experiment III.



## C H A P. IV.

*Containing an Account of Experiments made with Calculi and the Juices of Limons, Rue, Turnips, and the Decoction of them ; with Cyder, and the Juice of Codlins.*

*Addition to EXPERIMENT V.*

§. 61. **I**N my Account of Experiment V, I took Notice, that when I examin'd the *Calculus* on *October 23, 84* Days after it had steep'd in the Juice of *Limons*, I found it remain'd hard.

§. 62. I have now to add, that *October 30*, I put the same Stone and Juice into a *warm Digestion* for five Hours.

*November 4*, I examin'd it again, when to View it appear'd whole ; but in handling of it, it broke into several small Pieces, which easily press'd into a fine Powder.

## E X P E R I M E N T IX.

§. 63. *July* 26, I put a *Calculus* weighing seven Grains into one Ounce and half of the Juice of RUE.

It had a warm Digestion about eight Hours.

*August* 24, I examin'd it, and found its Weight the same, and as hard as ever, but turn'd black in Colour.

In Digestion 29 Days.

## E X P E R I M E N T X.

§. 64. *Sept.* 4, I put the *Calculus* mention'd in the last Experiment, with the Fragment of another *Calculus* weighing three Grains, into two Ounces of the Juice of LIMONS.

*September* 18, I examin'd them, and found both of them, tho' to View appearing of the same Bulk, yet dissolved into a soft meal-like Substance.

In Digestion 14 Days.

## E X P E R I M E N T XI.

§. 65. *September* 7, I put the Fragment  
of

of a *Calculus*, weighing three Grains, into four Ounces of the Juice of TURNIPS.

It had a warm Digestion 5 Hours.

*September* 18, I examin'd it ; it had the same Appearance, except that it seem'd diminished in Bulk : When I took it into my Fingers, it broke into severall smal Parts about the Bigness of three or four Grains of Sand each ; only in the Center there remain'd a Part about the Bigness of one Grain, which was hard. I return'd the calculous Matter into the Juice again.

*September* 27, I examin'd, and found every Part of it, quite dissolved, and as soft as Jelly.

In Digestion 20 Days.

## EXPERIMENT XII.

§. 66. *September* 30, I put the Fragment of a *Calculus*, weightng five Grains, into two Ounces of a strong *Decoction* of TURNIPS.

§. 67. *Oct.* 7, I examin'd it, and found the Cohesion of its Parts on the Surface pretty much weakned.

*October* 23, I found it softer.



34 *Experiments made with Calculi, &c.*

§. 68. *October* 30, it stood in a warm Digestion five Hours.

*November* 4, I examin'd it again : It came out of the Phial whole, but felt very soft, and entirely dissolved.

In Digestion 35 Days.

EXPERIMENT XIII.

§. 69. *July* 25, I put a *Calculus*, weighing eight Grains, into two Ounces of CYDER.

It had a warm Digestion eight Hours.

§. 70. *August* 24, I examin'd it : It came out of the Phial whole, appear'd the same in Bulk, look'd of a blackish Colour, but was soft as any Lump of Snuff, and as easily press'd into a fine Powder. The CYDER was become of a darker Colour.

In Digestion 30 Days.

EXPERIMENT XIV.

§. 71. *September* 4, I put the Fragment of a *Calculus*, weighing eleven Grains, into two Ounces of CYDER.

It had a warm Digestion five Hours.

§. 72.

§. 72. *September* 18, I examin'd it, and found the outer Part of the Stone soft; but the inner Part (in Bulk about four Grains) was hard.

§. 73. *September* 27, I found the remaining little Lump *soft*, and dissolved.

In Digestion 23 Days.

## EXPERIMENT XV.

§. 74. *September* 4, I put the Fragment of a *Calculus*, weighing seven Grains, into two Ounces of the *Juice* of CODLINS.

§. 75. *September* 8, I observed some small *Air-Bubbles* ascending from it.

It had a warm Digestion five Hours.

§. 76. *September* 18, I examin'd it: Its Bulk seem'd diminished more than one Half; when I took it between my Fingers, it broke into Pieces, which I return'd into the Juice.

§. 77. *September* 27, I found the Stone more divided into Parts, which felt *soft* like wet Clay, and mash'd by a gentle pressing my Fingers on them.

In Digestion 23 Days.

## EXPERIMENT XVI.

§. 78. *September 4*, I put a *Calculus*, weighing six Grains, into another two Ounces of the *Juice* of CODLINS.

§. 79. *September 8*, I observed some *Air-Bubbles* ascending from the Stone, as in the last Experiment.

§. 80. *September 18*, I examin'd it ; it then look'd diminished to the Bulk of two Grains : When I felt it, which I did very gently, it divided into small Parts, which, by moving them between my Fingers, without any Violence, became a fine Sand.

In Digestion 14 Days.

§. 81. I shall only at present, from these EXPERIMENTS, make two Observations, *viz.*

*Obs. 1.* That the *Juice* of RUE, tho' it consists of subtile, and pungent Particles, does not appear to have a Quality *dissolvent* of the *Calculus*.

*Obs. 2.* That the *Juice* of TURNIPS, the *Decoction* of them, and consequently boil'd  
*Turnips,*



*Turnips, Cyder, and Codlins,* have each of them a *QUALITY dissolvent* of the *Stone* in human Bodies; and may be fitly used to the Purpose of communicating a *dissolvent Quality* to the *URINE* of Persons afflicted with it.

*Nov. 9. 1738.*

## C H A P. V.

*Containing an Account of Experiments made with Calculi, and the Juice of Mulberries, with some suitable Observations; and likewise an Answer to an Objection against ACIDS being capable of communicating a dissolvent Quality to the Urine of Persons.*

## E X P E R I M E N T XVII.

§. 82. *AUGUST* 19, 1738, I put a *Calculus*, weighing eight Grains, into two Ounces of the Juice of MULBERRIES; it stood in a *cold* Digestion till *August* 24, when, on Examination, it appear'd whole; but when felt, was as soft in a Manner as Jelly.

In Digestion 5 Days.

## EXPERIMENT XVIII.

§. 83. *August 29, 1738,* I put the Fragment of a *Calculus*, weighing seven Grains, into the same *Juice* of MULBERRIES, used in the former Experiment.

§. 84. *Sept 4,* it appear'd the same in Bulk, but felt *soft*, and flatted by a gentle Pressure. I put it again into the Juice.

§. 85. *Sept. 18.* I examin'd it again, when it appear'd much diminished in Bulk, and by gently putting my Finger on it, it divided, or separated, as would a little Lump of very fine wet Sand.

In cold Digestion 20 Days.

## EXPERIMENT XIX.

§. 86. *August 29, 1738,* I put a *Calculus*, weighing nine Grains, into two Ounces of the Juice of MULBERRIES.

§. 87. *September 4,* it felt hard, but weigh'd, tho' wet, near a Grain less than it did, when first put into the Juice.

§. 88. *September 18,* it felt hard.

D 4

§. 89.



§. 89. I gave it a warm Digestion for about five Hours.

§. 90. *September 27*, it remain'd hard, tho' more diminished in Weight.

In Digestion 29 Days.

## EXPERIMENT XX.

§. 91. *August 29, 1738*, I put a *Calculus*, weighing nineteen Grains, into two Ounces and a half of the *Juice* of MULBERRIES.

§. 92. This STONE had before stood in Digestion 30 days in a Mixture of *Honey*, and *Oil*, without any discernible Effect, it feeling as hard as ever.

§. 93. *September 4*, I examin'd it: The Surface of it look'd smooth, somewhat shining, like some Jellies, and was very *soft*: The outer Part of the Stone most easily press'd into an almost impalpable Powder: The inner Part of it felt somewhat hard, but could easily be press'd into a Mash; which I did not do, but put it again into the Juice.

§. 94. *September 18*, I examin'd the Remainder of the Stone: To View it look'd entire,

entire, as when return'd into the Juice ; but bruised into a Mash by taking it, without any Force, between my Finger and Thumb ; however, I put the mash'd Parts into the Juice again.

§. 95. *September 30*, I examin'd them again, and found them as soft as Jelly.

In Digestion 32 Days.

## EXPERIMENT XXI.

§. 96. *August 29*, 1728, I put the Fragment of a *Calculus*, weighing sixteen Grains, into two Ounces of the Juice of MULBERRIES.

§. 97. *September 4*, I examin'd, and the Observations which occurred in this Experiment, were exactly the same as in the last, on *Sept. 4*, §. 93.

§. 98. *September 18*, it appear'd diminished in Bulk near three Fourths.

§. 99. *September 30*, I examin'd it again ; it came out of the Juice whole, was much more diminished in Bulk, and a very gentle Pressure between my Finger and Thumb, squeez'd it into a fine Powder.

In Digestion 32 days.

## EXPERIMENT XXII.

§. 100. *November* 13, 1738, I put the Fragment of a *Calculus* weighing one Grain, into two Ounces of MULBERRY WINE, and gave it a warm Digestion four Hours.

§. 101. *November* 14, it was in a warm Digestion seven Hours.

§. 102. *November* 16, I examin'd, and found it *soft* ; but the Bulk in Appearance seem'd larger.

In Digestion 3 Days.

## EXPERIMENT XXIII.

§. 103. *November* 13, 1738, I put the Fragment of a *Calculus*, weighing one Grain, and three Quarters, into a Mixture of one Ounce of *New River Water*, and two Ounces of the *Juice* of MULBERRIES, into which some *Brandy* had been put to preserve it. I set it in a warm Digestion four Hours.

§. 104. *November* 14, it stood in a warm Digestion seven Hours.

*November*



November 16, I examin'd, and found it *soft*, tho' it seem'd larger in Bulk.

In Digestion 3 Days.

## EXPERIMENT XXIV.

§. 105. November 13, 1738, I put the Fragment of a *Calculus*, weighing one Grain, into two Ounces of old *Juice* of MULBERRIES, mixed with half an Ounce of *New River Water*; and set it in a warm Digestion four Hours.

§. 106. November 14, it stood in a warm Digestion seven Hours.

§. 107. November 16, I examin'd, and found it dissolved.

In Digestion 3 Days.

## EXPERIMENT XXV.

§. 108. November 13, 1738, I put the Fragment of a *Calculus* weighing one Grain, into two Ounces of a Mixture made with equal Parts of MULBERRY *Brandy*, and *New River Water*, and gave it a warm Digestion four Hours.

§. 109. *November* 14, it stood in a warm Digestion seven Hours.

§. 110. *November* 16, I examin'd, and found it softer, but not dissolved.

In Digestion 3 Days.

§. 111. From these EXPERIMENTS made with different Sorts of *Calculi*, we may observe,

*Obs.* 1. That the *Juice* of MULBERRIES has a Quality *dissolvent* of the STONE taken out of an human Body.

§. 112. This is evident from the Experiments related. Indeed in EXPERIMENT XIX. the greatest Part of the *Calculus* remain'd hard, and undissolved at the End of 29 days Digestion: But its being diminished in Weight above a ninth Part proves, that the Juice had some Effect on that very hard Stone; and that many Particles of it had been dissolved, and separated.

§. 113. *Obs.* 2. That the *Juice* of MULBERRIES is a very strong, and quick *Dissolvent* of several Sorts of *Calculi*. This may be concluded from EXPERIMENT XVII, in which a Stone of eight Grains in Weight was entirely dissolved in the Space of five days,

days, by Means only of a cold Digestion ; and from Experiment XVIII, XX, XXI, XXII, XXIII, XXIV, in which it appears that the several *Calculi* became *soft* within the first five days of Digestion, and afterwards thoroughly dissolved.

§. 114. *Obs.* 3. That the *Juice* of MULBERRIES is a much stronger, and quicker *Dissolvent* of *Calculi*, than the *Juice* of LIMONS.

This will appear evident by comparing the EXPERIMENTS made with these different Juices.

§. 115. *Obs.* 4. That MULBERRIES is a Fruit, which may fitly be eaten for communicating to the Urine a Quality dissolvent of the Stone either in the Kidneys, or Bladder.

§. 116. *Obs.* 5. That MULBERRY WINE is a good *Dissolvent* of the *Calculus* ; as appears from EXPERIMENT XXII, and consequently may properly be drank as a Remedy against the *Stone* in the Kidneys, or Bladder.

§. 117. *Obs.* 6. That altho' the Juice of *Mulberries* is a good *Dissolvent* of *Calculi*, yet it may not be the most suitable for every  
Sort



Sort of them. This seems a reasonable Inference from EXPERIMENT XIX.

§. 118. The EXPERIMENTS which have been related prove, that several *Acids* in common Use have a Quality *dissolvent* of the human *Calculus* out of the Body: But there is one OBJECTION, which appears strong against our Hope of communicating to the URINE of Persons afflicted with the *Stone*, a QUALITY DISSOLVENT of it, which it may be proper to consider before I proceed to other Experiments.

§. 119. *Obj.* It may be said, that altho' many ACIDS will dissolve the *Calculus* out of the Body, yet, since *no Acid* has ever, by chymical *Analysis*, been found in the *Urine* of any Person; and since it has been made evident by Experiments, that there are no *acid Particles* in the Blood, it is reasonable to infer, that whatever ACIDS are taken into the Stomach, the acid Particles, some how, loose their acid Properties before, or immediately on their being received into the Blood: And therefore, that no *acid Quality* is communicable to the Urine by Means of any *Acids* taken into the Stomach; and consequently, that a Quality

lity *dissolvent* of Stones in the Kidneys, and Bladder cannot be communicated to the Urine by Means of any Acids taken into the Stomach.

§. 120. *Answer.* As to this OBJECTION, supposing that *no acid* Quality is communicable to the Urine by any Acids taken into the Stomach; yet the Reasonableness of the Conclusion from this Antecedent does not appear evident to me. For altho' an *acid Quality* should not be communicable to the Urine, for the Reasons mentioned, yet a Quality *dissolvent* of the Stone in the Kidneys, or Bladder, very possibly may, by such Means, be imparted to the Urine.

§. 121. It is certain, 1. That very sensible Effects are often produced in the Blood, and in the Excretions from it by Means of *acid Aliment*, and *acid Medicines*; such as cooling the Blood when too hot; abating the Force of the Pulse, and the Celerity of the Motion of the Blood; increasing the Quantity of Urine; procuring Sweat, and divers other Particulars, which might be mentioned: Which Effects must be the Consequences of some *new Quality* of the CHYLE, resulting

resulting from the Mixture of ACIDS with the Contents of the Stomach, and Bowels.

§. 123. 2. It is in my Apprehension, as certain, that this *new Quality* introduced into the Chyle by Means of *acid Aliment*, or *acid Medicines* taken into the Stomach, is a *dissolvent Quality*. This I infer, 1. From the Effects of Acids on a fizy, glutinous Blood.

§. 123. In some Instances, where I have thought it needful to order *Bleeding*, and have seen the Blood with a Coat of *Size*, near a Quarter of an Inch thick on the *Coagulum* of red Globules, without any more Bleeding, I only order'd some *acid Remedies*; in the Use of which, those Patients, in a short Time, became free from those morbid Symptoms, which had been produced by the Siziness of their Blood: Which is to me a Reason for thinking, that altho' the acid Particles do not enter into the Blood, at least not unalter'd, yet that a *dissolvent Quality* is, by Means of them, communicated first to the Chyle, then to the Blood; and there destroys the Cohesion of the Parts of the viscid Humours.

§. 124. 2. I infer my Opinion from the  
very



very common or frequent Effects of an excessive Eating of acid Fruits in Summer, *viz. Loosenesses*, and putrid Fevers, attended with *colliquative* Evacuations : Because such Symptoms could not arise, but from a Cause in some Measure *dissolving* the natural Consistence of the animal Fluids.

§. 125. Now since a *dissolvent Quality* is communicable to the Blood with the Chyle, by Means of *Acids* received into the Stomach, we may, I think, without much Difficulty, apprehend it communicable also to the Urine, thro' the Blood as a *Medium* ; and then, why may we not hope that this *dissolvent Quality* thus communicated to the Urine, may act on the *Calculi* in the Kidneys, and Bladder ; and gradually destroy the Cohesion of their component Parts, and make them separate, some after other, till they are dissolved, and washed out of the Body with the Urine.

§. 126. I do not say that the *Dissolution* of the Stone in the Kidneys, or Bladder, is certain by this Means : This only can be known by proper Tryals ; but there seems to be a very great PROBABILITY of obtaining so great a Benefit by suitable Aliment.

§. 127. But supposing, that *Acids* should not prove effectual to the Purpose intended, there are other Sorts of Aliment, of different Denominations, which have a Quality dissolvent of *Calculi*; e. g. *Turnips*, and other Vegetables, which have none of the sensible Properties of Acids, &c.

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## C H A P. VI.

*Containing an Account of Experiments made with Calculi, and the Juice of Strawberries, Strawberry Brandy, and a Mixture of Strawberry Brandy and Water; likewise with Vinegar, the Juices of Elderberries, Burgamy Pears and Grapes; also with Mountain Wine, Red Port Wine, Honey, and Water, and New River Water, with suitable Observations.*

## E X P E R I M E N T XXVI.

§. 128. *JUNE* 17, 1738, I put a *Calculus*, weighing two Grains, into six Drachms of the *Juice* of STRAWBERRIES.

§. 129. *July* 7, I examin'd it, and found it softer, and diminished half in Weight.

In cold Digestion 20 days.



## EXPERIMENT XXVII.

§. 130. *November 13, 1738, I put the Fragment of a Calculus, weighing one Grain, into one Ounce of STRAWBERRY BRANDY sweetned with Sugar, and set it in a warm Digestion four Hours.*

*November 14, it stood in a warm Digestion seven Hours.*

§. 131. *November 16, I examin'd it; it broke into two Parts, which felt hard.*

*In Digestion 3 days, and 11 Hours of it warm.*

## EXPERIMENT XXVIII.

§. 132. *November 13, 1738, I put the Fragment of a Calculus, weighing one Grain, into a Mixture of equal Parts of STRAWBERRY BRANDY, and Water, and set it in a warm Digestion four Hours.*

*November 14, it stood in a warm Digestion seven Hours.*

§. 133. *November 16, I examin'd, and found it very soft.*

In

In Digestion 3 days, and 11 Hours of it warm.

§. 134. From these EXPERIMENTS it appears,

*Obs.* 1. That STRAWBERRIES have a Quality *dissolvent* of the Stone. The Effects of Experiment XXVI, and XXVIII, prove this. They were different *Calculi* in those Experiments.

§. 135. *Obs.* 2. That a Degree of Heat equal to that of the Blood, renders more efficacious the *dissolvent* Quality of *Strawberries*, as well as of other Vegetables. This is manifest from comparing the XXVIII<sup>th</sup> Experiment with the XXVI<sup>th</sup>. The adding eleven Hours warm Digestion, procured a more thorough Dissolution of the *Calculus*, in three days, than in the other was obtained in twenty days of a cold Digestion.

§. 136. *Obs.* 3. That BRANDY is an Impediment to the Action of the dissolvent Juice on the *Calculus*. This will be evident by comparing Experiment XXVII. with XXVI. and XXVIII.

§. 137. *Obs.* 4. That STRAWBERRY

BRANDY diluted with Water is a good Remedy against the Stone either in the Kidneys, or Bladder. This may well be infer'd from Experiment XXVIII.

§. 138. It must be observed, that the *Calculi* in the XXVII<sup>th</sup> and XXVIII<sup>th</sup> Experiments had equal Time, and equal Degree of Heat in their Digestion; and that the different Effect in those Tryals was not owing to any Difference in the Manner of making them.

### EXPERIMENT XXIX.

§. 139, *September* 28, 1738, I put a *Calculus*, weighing three Grains and a half, into four Ounces of VINEGAR.

§. 140. *September* 18, I examin'd it, the Vinegar remain'd very clear, and the Stone had the same Appearance, as when first put into it; but when felt, was found as *soft* as Jelly.

In cold Digestion 10 Days.

### EXPERIMENT XXX.

§. 141. *November* 13, 1738, I put the Fragment of a *Calculus*, weighing three  
Grains,



Grains, into two Ounces of VINEGAR, and set it in a warm Digestion four Hours.

*November 14*, it stood seven Hours in a warm Digestion.

§. 142. *November 16*, I examin'd it; it look'd entire, but was soft, and dissolved.

In Digestion 3 Days, and 11 Hours of it warm.

§. 143. *Obs.* From these EXPERIMENTS XXIX, XXX, we may conclude, that *Vinegar* is a good *Dissolvent* of human *Calculi*, and that it may be used for communicating a dissolvent Quality to the Urine of Persons afflicted with the Stone.

### EXPERIMENT XXXI.

§. 144. *September 30*, 1738, I put the Fragment of a *Calculus*, weighing fifteen Grains, into four Ounces of the *Juice* of ELDERBERRIES.

§. 145. *October 23*, I found the Surface of it softned.

*October 30*, it stood five Hours in a warm Digestion.

§. 146. *November 4*, it look'd much the same, as when it was put into the Juice;

but when poured out into a flat earthen Pan, it divided into several Parts, which easily rub'd between my Finger and Thumb, into small gritty Parts.

In Digestion 34 Days, and only 5 Hours of it warm.

§. 147. *Obs.* From this EXPERIMENT, (§. 144.) it appears that the *Juice* of ELDERBERRIES has a Quality dissolvent of the Stone.

## EXPERIMENT XXXII.

§. 148. *September 9, 1738*, I put a *Calculus*, weighing two Grains and a half, into four Ounces of the *Juice* of BURGAMY PEARS.

§. 149. *September 18*, (that is the ninth day of Digestion) it appear'd to View as at first, but crumbled to Pieces in handling of it, except a little Piece of about half a Grain in Weight. I returned the calculous Matter into the Juice.

§. 150. *September 20*, I found it totally dissolved, and the Matter at the Bottom of the Juice felt like a a soft, smooth, muddy Substance,

Substance, as if a small Bit of Clay had been dissolved.

In Digestion 11 Days.

§. 151. *Obs.* From this EXPERIMENT it appears, that the *Juice* of BURGAMY PEARS has a Quality dissolvent of the Stone, and that Persons afflicted with it may to their Advantage eat of this Fruit.

### EXPERIMENT XXXIII.

§. 152. *September* 30, 1738, I put the Fragment of a *Calculus*, weighing six Grains, into two Ounces of the *Juice* of *white GRAPES*.

*October* 7, I found it a little softened.

§. 153. *October* 23, I found it dissolved.  
In cold Digestion 23 Days.

### EXPERIMENT XXXIV.

§. 154. *November* 13, 1738, I put the Fragment of a *Calculus*, weighing one Grain, into two Ounces of MOUNTAIN WINE; and set it in a warm Digestion four Hours.

*November*



58 *Experiments made with Calculi, &c.*

November 14, it stood in a warm Digestion seven Hours.

§. 155. November 16, I examin'd, and found it as *hard* as ever.

In Digestion 3 days, 11 Hours of it warm.

EXPERIMENT XXXV.

§. 156. November 13, 1738, I put the Fragment of a *Calculus*, weighing one Grain, and a Quarter, into two Ounces of *Red PORT WINE*, and set it in a warm Digestion four Hours.

November 14, it stood in a warm Digestion seven Hours.

§. 157. November 16, I examin'd, and found it *hard*.

In Digestion 3 Days, of which 11 Hours warm.

§. 158. *Obs.* 1. That the Juice of *white GRAPES* has a Quality dissolvent of the *Calculus*.

This appears from Experiment XXXIII. therefore,

§. 159. *Obs.* 2. *WHITE GRAPES* therefore are

are a Fruit, which may fitly be eaten by Persons afflicted with the Stone.

§. 160. *Obs.* 3. From Experiment XXXIV, XXXV, we have no Reason to expect that either *Mountain*, or *Red Port Wine* will contribute any Thing to the *Dissolution* of the *Calculus*.

### EXPERIMENT XXXVI.

§. 161. *July* 25, 1738, I put a *Calculus*, weighing thirty Grains, into a Mixture made with one Ounce of HONEY, and two Ounces of *Water*.

§. 162. *July* 26, I view'd it several Times, and observed small *Air-Bubbles* to rise pretty fast from the Stone.

*July* 27, 28, small *Air-Bubbles* continued rising from it.

§. 163. *August* 24, I examin'd, and found the Surface of the Stone soft; and set it to dry.

*September* 30, I weighed it dry, and it weighed but twenty-two Grains; diminished in Weight near one Third; the Remainder *hard*.

§. 164. It stood in a warm Digestion several Hours.

In Digestion 30 Days.

§. 165. *Obs.* From this EXPERIMENT it appears reasonable to conclude, that drinking *Honey* and *Water* may contribute somewhat to the *Dissolution* of the Stone either in the Kidneys, or Bladder.

## EXPERIMENT XXXVII.

§. 166. *November* 13, 1738, I put a *Calculus*, weighing one Grain, and a Quarter, into four Ounces of NEW RIVER WATER, and set it in a warm Digestion four Hours.

§. 167. *November* 14, it stood in a warm Digestion seven Hours.

§. 168. *November* 16, I examin'd, and found it *hard*, and just the same as when put into the Water.

In Digestion 3 Days, of which 11 Hours warm.

§. 169. *Obs.* From this EXPERIMENT it does not appear that *New River Water* contributes any Thing to the *Dissolution* of the  
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the Stone, tho' aided with a Degree of Heat equal to that of the Blood : *i. e.* it does not do so in the Space of a three days Digestion.

§. 170. I grant that a *Calculus*, by a sufficient Decoction in any, at least of River Water, may have its Bulk, and Weight diminished ; but that Diminution, in my Apprehension, seems to result from the extreme HEAT of the boiling Water, forcing Particles of *Air* (which constitutes a great Part of the *Calculus*) to separate, and fly off from it. But as a *Calculus* consists very much of *alkaline Salts*, so a long Maceration of it in Water, assisted with a proper Degree of Heat, may possibly in time dissolve it ; especially if there happens to be but little of the *animal Oil* in the Contexture of it ; which Consideration shews, that WATER may profitably be drank by some Persons afflicted with the Stone.

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## C H A P. VII.

*Containing an Account of Experiments made with Calculi, and Asparagus, Parsley, and Apples, with suitable Observations.*

## E X P E R I M E N T XXXVIII.

§. 171. **S** E P T E M B E R 7, 1738, I put the Fragment of a *Calculus*, weighing four Grains and a half, into two Ounces of the *Juice* of ASPARAGUS Roots.

§. 172. *September* 18, that is, the eleventh day of its Digestion, it look'd as large as when put into the Juice; but when felt, was bruised, or flatted by a little Pressure.

§. 173. *September* 30, the Stone appear'd to View diminished in Bulk, and when felt, separated into a Powder by putting my Finger gently upon it.

In cold Digestion 23 Days.

§. 174. *Obs.* From this EXPERIMENT it appears, that *Asparagus* has a Quality dissolvent

solvent of the *Stone*; and therefore, that eating the young Shoots of them is one proper Means of communicating a dissolvent Quality to the Urine of Persons afflicted with it.

### EXPERIMENT XXXIX.

§. 175. *July* 26, 1738, I put a *Calculus*, weighing thirty-one Grains, into five Ounces of the *Juice* of PARSLEY Leaves.

It had several Hours a warm Digestion.

§. 176. *August* 21, I examin'd it, and found it hard, and weigh'd thirty-six Grains wet as taken out of the Juice.

In Digestion 26 Days.

### EXPERIMENT XL.

§. 177. *Sept.* 30, 1738, I put two Fragments of *Calculi*, weighing two Grains each, into two Ounces of the *Juice* of PARSLEY Leaves.

§. 178. *October* 7, I found them as hard as ever.

§. 179. *October* 23, they remain'd hard, after three and twenty days of a cold Digestion.

§. 180.



64 *Experiments made with Calculi, &c.*

§. 180. *October* 30, they stood in a warm Digestion five Hours.

§. 181. *November* 4, I examin'd them, and found them *soft*.

In Digestion 35 Days.

EXPERIMENT XLI.

§. 182. *September* 30, 1738, I put the Fragment of a *Calculus*, weighing seven Grains, into ten Drachms of the *Juice* of PARSLEY *Roots*.

§. 183. *October* 7, and 23, I examin'd, and found the Stone as *hard* as ever.

§. 184. *October* 30, it stood in a warm Digestion five Hours.

§. 185. *November* 4, I examin'd it; to View it look'd as when it was put into the Juice; but when put on Paper, it felt very soft, and separated into a fine Sand.

In Digestion 35 Days.

§. 186. *Obs.* 1. From the two last EXPERIMENTS it appears, that the *Juice* both of the *Roots* and *Leaves* of PARSLEY have a Quality *dissolvent* of the Stone.

§. 187. *Obs.* 2. That the dissolving Particles did not appear to act upon the *Calculi*

*culi*, till put into some Motion by a Degree of Heat equal to that of the Blood: But I may add, that *Dissolvents* taken into the Stomach, will have the Assistance of a good *digesting Heat*; and that if a Quality dissolvent of the Stone be communicated to the Urine, besides the Advantage of Heat in the *Dissolvent*, and in the *Calculi*, or Substances to be dissolved, there will be another from the Motion of the URINE, in its Descent from the excreting *Tubuli* of the Kidneys, *viz.* the washing, or carrying out of the Body, the Particles of the Stone, as they are dissolved, or separated from the main Body of it.

§. 188. *Obs.* 3. From Experiment XXXIX, we have Reason to infer, that the Juice of PARSLEY *Leaves*, tho' it has a Quality dissolvent of some *Calculi*, yet it is not capable of dissolving every Sort of them.

## EXPERIMENT XLII.

§. 189. *November* 13, 1738, I put a *Calculus*, weighing seven Grains, into an Ounce and half of the *Juice* of the *Apple* called

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the GOLDEN RENNET, and set it in a warm Digestion four Hours.

§. 190. *November* 14, it stood in a warm Digestion seven Hours.

§. 191. *November* 16, I examin'd, and found the Juice coagulated to the Consistence of a Jelly, and the Stone as *hard* as ever.

In Digestion 3 Days, and 11 Hours of it warm.

### EXPERIMENT XLIII.

§. 192. *November* 13, 1738, I put a *Calculus*, weighing one Grain, and three Quarters, into three Ounces of a *Decoction* of GOLDEN RENNETS, and set it in a warm Digestion four Hours.

§. 193. *November* 14, it stood in a warm Digestion seven Hours.

§. 194. *November* 16, I examin'd, and found it hard; but in handling, it broke, and a small Sand cleav'd to my Fingers: The broken Parts were put again into the *Decoction*.

§. 195. *December* 27, I examin'd, and found the broken Stone still hard.

In



In Digestion 44 Days, 11 Hours of it warm.

## EXPERIMENT XLIV.

§. 196. *November* 13, 1738, I put a *Calculus*, weighing forty-eight Grains, into two Ounces of a *Decoction* of GOLDEN PIPPINS, and set it in a warm Digestion four Hours.

§. 197. *November* 14, it stood in a warm Digestion seven Hours.

§. 198. *November* 16, I examin'd, and found the outer *Lamin* in Part dissolved; the Remainder *hard*.

§. 199. The Stone weighed, when dry, thirty-seven Grains, and lost nine Grains by this Experiment.

In Digestion 3 Days, and 11 Hours of it warm.

## EXPERIMENT XLV.

§. 200. *December* 29, 1738, I put a *Calculus*, weightng four Grains, and a half, of a reddish brown Colour, into two Ounces of GOLDEN PIPPIN *Tea*.

68 *Experiments made with Calculi, &c.*

§. 201. *December* 30, it stood in a warm Digestion ten Hours.

§. 202. *January* 1, it had a warm Digestion eight Hours: Afterwards I examin'd, and found it *hard*.

§. 203. *January* 3, it was in a warm Digestion nine Hours.

§. 204. *January* 4, I examin'd, and found it *hard*.

In Digestion 7 Days, and 27 Hours of it warm.

EXPERIMENT XLVI.

§. 205. *February* 11, 1738-9, I put a *Calculus*, weighing three Grains, into an Ounce of the *Juice* of GOLDEN PIPPINS.

§. 206. *February* 13, and 14, it stood in a warm Digestion ten Hours each day.

§. 207. *February* 15, it was in a warm Digestion eight Hours. In the Evening I examin'd, and found it *hard*.

In Digestion 3 Days, and 28 Hours of it warm.

EXPERIMENT XLVII.

§. 208. The same day (§. 205.) I put two *Calculi* into two Ounces of a *Decoction* of  
of

of GOLDEN PIPPINS, one of them weighed three Grains, and the other one Grain.

§. 209. *February* 13, they stood in a warm Digestion ten Hours.

§. 210. *February* 14, they were in a warm Digestion ten Hours.

§. 211. *February* 15, they had a warm Digestion eight Hours. In the Evening I examin'd them, and found the larger Stone *hard*, but the smaller Stone was *soft*, and easily rub'd into a Sand.

In Digestion 3 Days, and 28 Hours of it warm.

## EXPERIMENT XLVIII.

§. 212. *December* 29, 1738, I put two small *Calculi* into one Ounce of the *Juice* of the Apple called NON-PARELL, one weigh'd a Grain and a half, the other but half a Grain.

§. 213. *December* 30, they stood in a warm Digestion ten Hours.

*January* 1, they were in a warm Digestion eight Hours.

*January* 3, they had a warm Digestion nine Hours.



§. 214. *January 4*, I examin'd, and found them both *hard*.

In Digestion 6 Days, and 27 Hours of it warm.

## EXPERIMENT XLIX.

§. 215. The same Day (§. 212.) I put a *Calculus*, weighing six Grains, into two Ounces of a *Decoction* of NON-PARELLS.

§. 216. *December 30*, it stood in a warm Digestion ten Hours.

§. 217. *January 1*, I examin'd, and found it a little softened on the Surface. I returned it into the *Menstruum*, and set it in a warm Digestion eight Hours.

§. 218. *January 3*, it stood in a warm Digestion nine Hours.

§. 219. *January 4*, I examin'd it, and found it so *soft*, that in the handling it gently, it broke into many Pieces, which were returned into the *Menstruum*, and left in a cold Digestion.

§. 220. *January 22*, I examin'd, and found the broken Pieces as soft as wet Clay.

In Digestion 24 Days, and 27 Hours of it warm.

§. 221.

§. 221. This Stone was almost thoroughly dissolved in the first six Days of the Digestion.

## EXPERIMENT L.

§. 222. The same Day (§. 212.) I put two small *Calculi*, (one of them somewhat larger than the other, but both together) weighing one Grain, into two Ounces of a *Tea* made with NON-PARELLS.

§. 223. *December* 30, they had a warm Digestion ten Hours.

§. 224. *January* 1, I examin'd, and found the smaller Stone softned, and the other as *hard* as ever. I return'd them into the *Tea*, and set it in a warm Digestion eight Hours.

§. 225. *January* 3, they stood in a warm Digestion nine Hours.

§. 226. *January* 4, I examin'd them : The lesser one was *dissolved*, and the other remain'd *hard* as at first.

In Digestion 6 Days, and 27 Hours of it warm.

§. 227. From these EXPERIMENTS made with APPLES, I may observe the following Particulars, *viz.*

*Obs. 1.* It appears that the Apple called the GOLDEN RENNET has very little of a Quality *dissolvent* of the Stone: For the Juice of this Fruit had no Manner of Effect on the *Calculus*; and the Decoction so little, that tho' the Stone broke, it remain'd *hard* after four and forty Days Digestion in it. *Vid.* Experiments XLII, XLIII.

§. 228. *Obs. 2.* That the *Decoction* of GOLDEN PIPPINS has a Quality *dissolvent* of the Stone.

This is evident from Experiments XLIV, XLVII.

§. 229. *Obs. 3.* That it does not appear that either the *Juice*, or the *Tea* made of this Fruit, (§. 196.) is capable of dissolving the Stone. They produced no Effect in the Experiments XLV, XLVI.

§. 230. *Obs. 4.* That the *Decoction*, and *Infusion* of NON-PARELLS have a Quality *dissolvent* of some *Calculi*. This is manifest from Experiments XLIX, L.

§. 231. *Obs. 5.* That the meer *Juice* of  
NON-



NON-PARELLS did nothing towards the Dissolution of the Stone.

§. 232. It deserves Notice that the *dissolvent Quality* of the APPLES was most active in the *Decoction* of them; not near so strong in the *Infusions*, or *Teas* made of the Fruit; and entirely *latent*, or inactive in their Juices.

§. 233. It seems reasonable hence (§. 232.) to infer, that by DECOCTING the *Roots, Barks, Woods, Leaves* and *Seeds*, of *Trees* and *Plants*, used in Medicines, those Qualities may be separated from them, which were latent in them, and could not be obtained by any hot *Infusion* of them, since their Substances, or Parts, are more compact, than those of the Flesh of Apples; and consequently, the Reason is evident, why, in most Cases where a Medicine must be given in a liquid Form, that of a *Decoction* is preferable to any *Infusion*, when the Matter of the Medicine is some vegetable Substance.

§. 234. AS TO APPLES, divers other Sorts of them (were they tried) might discover as little of the dissolvent Quality we are seeking

seeking after, as the *Golden Rennets* did ; (Experiments XLII, XLIII.) and supposing they have none of it, yet the eating of them may be useful to Persons troubled with the *Stone*, or *Gout*, by diminishing the Quantity of *alkaline Salts* in the Blood, which are as *Pabulum* to those Diseases.

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## C H A P. VIII.

*Containing an Account of Experiments made with Calculi and Bread ; also with Beer, Tea, Coffee, Chocolate, Coco, and Milk, with suitable Observations.*

## E X P E R I M E N T LI.

§. 235. *D*Ecember 28, 1738, I put a *Calculus*, weighing one Grain, into two Ounces of an *Infusion* of BREAD, made by pouring boiling Water on some Crum of white Bread, and leaving it to steep all the preceding Night.

§. 236. *December* 30, it stood in a warm Digestion ten Hours.

§. 237. *January* 1, I found it hard, and set it in a warm Digestion eight Hours.

*January* 3, it had a warm Digestion nine Hours.

§. 238. *January* 4, I examin'd, and found it so much softned, that it broke in gently feeling



whether it was hard, and Sand cleaved to my Fingers by handling it.

In Digestion 7 Days, and 27 Hours of it warm.

## EXPERIMENT LII.

§. 239. The same Day (§. 235.) I put a *Calculus*, weighing one Grain, into an Ounce and a half of the *Infusion* of white BREAD made by pouring *cold* Water on some of the Crum of it, and let it steep all the preceding Night.

§. 240. It had the same warm Digestion with the Stone in the last Experiment.

§. 241. *January* 4, I examin'd it, and found it so soft, that it broke into many Pieces, by feeling whether it was hard.

In Digestion 7 Days, and 27 Hours of it warm.

## EXPERIMENT LIII.

§. 242. *February* 13, 1738-9, I put a *Calculus*, weighing six Grains, and a half, into two Ounces and a half of an *Infusion* of white BREAD, made with *cold* Water, as in  
the

the last Experiment, and set it in a warm Digestion ten Hours.

§. 243. *February* 14, it was again in a warm Digestion ten Hours.

§. 244. *February* 15, it had a warm Digestion eight Hours. In the Evening I examin'd, and found the Cohesion of its Part destroyed; for it broke into many Pieces with a gentle Feeling it.

In Digestion not quite 2 Days and half, 28 Hours of it warm.

#### EXPERIMENT LIV.

§. 245. The same Day (§. 242.) I put three *Calculi*, weighing together one Grain, into two Ounces of an *Infusion* of BREAD, made in the same Manner as in Experiment LI, except that here only *warm* instead of *boiling Water* was poured upon the Bread. It had the same Time of Digestion, and Number of Hours in a warm Digestion with the last Experiment; and I examin'd this at the same Time, and found two of the Stones *soft*, but the other remain'd hard.

§. 246. *Obs.* From these EXPERIMENTS it appears, that *Bread* has an excellent Quality dissolvent of such Stones as are in the Kidneys, and Bladders of Men.

§. 247. I am acquainted with two Gentlemen, who eat some dry Bread in a Morning fasting, as a Remedy against the Stone and Gravel; and the *Experiments* related prove, that their doing so may be very useful to them.

§. 248. I may add, that the Bread, while chewing, receives a Quantity of *Saliva*, (or Humour secreted by the Glands emptying their Fluid into the Mouth) equal to its Weight; and being itself a dissolvent Liquor, may therefore more effectually extract the dissolvent Quality from the Bread. I cannot but approve of their eating the Bread dry, because of the Quantity of the *Saliva*, which is drawn forth, and mixed with it by chewing; but I think, that drinking a moderate Draught of *River Water* after it, might render their Method more beneficial, by making the dissolvent Particles to pass more speedily to their Kidneys, and Bladder.



EXPERIMENT LV.

§. 249. *December* 28, 1738, I put a rough and round *Calculus*, weighing three Grains, into two Ounces and half of *Ten Shilling* Small BEER, which was about three Weeks old, and set it in a warm Digestion ten Hours.

§. 250. *January* 1, it stood in a warm Digestion eight Hours.

§. 251. *January* 3, it stood in a warm Digestion nine Hours.

§. 252. *January* 6, I examin'd, and found it as *hard* as ever.

In Digestion 9 days, and 27 Hours of it warm.

EXPERIMENT LVI.

§. 253. *January* 24, 1738, I put a *Calculus*, weighing two Grains, and a half, into two Ounces of *Ten Shilling* Small BEER.

§. 254. It stood in a warm Digestion some Hours on *Feb.* 1, 3, 6; in all about thirteen Hours.

§. 255. *February* 9, I examin'd, and found it *hard* as ever.

In

In Digestion 16 Days, and 13 Hours of it warm.

§. 256. *Obs.* From these Experiments it does not appear, that Small BEER has any Quality dissolvent of the Stone.

## EXPERIMENT LVII.

§. 257. *February* 12, 1738-9, I put a *Calculus*, weighing two Grains and three Quarters, into two Ounces of BEER called *Porter*. It had a warm Digestion seven Hours on *February* 19, twelve Hours on *February* 20, and eight Hours on *February* 21. In the Evening of which Day, I examin'd, and found it *hard* as ever.

§. 258. *Obs.* It does not appear from this EXPERIMENT, (§. 257.) that *Strong Beer* has a Quality dissolvent of the Stone.

## EXPERIMENT LVIII.

§. 259. *December* 28, 1738, I put a rough oblong *Calculus*, weighing one Grain, and a half, into two Ounces of an Infusion of *green TEA*.

§. 260. *December* 30, it stood in a warm Digestion ten Hours.

*January* 1, it had a warm Digestion eight Hours.

*January* 3, it was in a warm Digestion nine Hours.

§. 261. *January* 4, I examin'd, and found it *hard*.

In Digestion 7 Days, and 27 Hours of it warm.

## EXPERIMENT LIX.

§. 262. *February* 12, 1738-9, I put a *Calculus*, weighing one Grain and a half, into two Ounces of an *Infusion* of *green TEA* sweetned with Honey.

*February* 13, 14, it was in a warm Digestion ten Hours each Day.

*February* 15, it was in a warm Digestion eight Hours. In the Evening I examin'd, and found it *hard*.

§. 263. *Obs.* These Experiments do not discover any Quality in *green TEA* dissolvent of the Stone; and therefore, that altho' drinking the Infusion of it may be useful to other Purposes, there appears no Reason



to imagine it can contribute any Thing to the Dissolution of the Stone in the Kidneys, or Bladder.

## EXPERIMENT LX.

§. 264. *July 31, 1738*, I put a *Calculus*, weighing eleven Grains, into three Ounces of strong COFFEE. It stood in a warm Digestion about five Hours.

§. 265. *August 28*, I examin'd it, and a small Bit in handling it broke off, which easily rub'd into an impalpable Powder between my Finger and Thumb. I return'd the Stone into the Coffee.

§. 266. *September 27*, I examin'd it, and found it *hard*, but a Sand rub'd from it between my Fingers.

In Digestion 53 Days, and 5 Hours of it warm.

## EXPERIMENT LXI.

§. 267. *December 28, 1738*, I put a rough *Calculus*, weighing one Grain, into two Ounces of strong COFFEE; and set it in a warm Digestion ten Hours.

*January*

*January* 1, it stood in a warm Digestion eight Hours.

*January* 3, it stood in a warm Digestion nine Hours.

§. 268. *January* 4, I examin'd, and found it *hard as ever*.

In Digestion 7 Days, 27 Hours of it warm.

§. 269. *Obs.* 1. In the last of these Experiments the Coffee had no Effect, and not much in the former, notwithstanding the Stone was one of the softest Sort, and lay in it near eight Weeks; and therefore I think it does not yet appear that Coffee deserves a Place among the DISSOLVENTS of *Calculi*.

§. 270. *Obs.* 2. From Experiment LX, it seems reasonable to infer, that *Coffee*, altho' it should not be capable of dissolving the Stone; yet the drinking it may be useful to prevent the Particles of alkaline *Salt*, *Air*, *Oil*, and *Earth*, from attracting each other, uniting and cohering to the Increase of the Bulk of the Stone.

§. 271. I mention this on the Account of the Advantage, which, it is said, some



have found by drinking this Liquor, as a Remedy against the *Stone* and *Gravel*.

§. 272. Mr. RAY observes, that *D. Dufour*, in his *Treatise on the Virtues, and Use of Coffee*, discourses with great Judgment, supporting or confirming his Observations, and Theory, with *Experiments*; and shews that this Liquor is useful against the scorbutick wandring *Gout*, and against the *Stone* and *Gravel* (a).

§. 273. And that *Muis* relates, that some of his Acquaintance, not a little tormented with nephritick Pains, became free from them by drinking daily a sufficient Quantity of Coffee (b).

(a) *D. Dufour*, — in *Tractatu suo de viribus, & usu potus Coffeæ*, magno cum judicio, differit, observationes, & theorias experimentis inædificans. aut confirmans. Utilem præcipuè esse ostendit in digestionem ciborum prava. — Præterea in *Arthritide vaga scorbutica*, in calculo, & arenulis (cui populi orientales idcirco minùs obnoxii sunt)

(b) *Idem* nonnullos, inquit, novi meorum familiarum antea haud parum à nephritide cruciatos, qui nullum incommodum inde amplius persenserunt, postquam potum Coffæ satis magnâ copiâ quotidie assumpsere, p. 85.

*Vid. Raii Hist. Plant. 1692.*



EXPERIMENT LXII.

§. 274. *February* 27, 1738-9, I put a *Calculus*, weighing three Quarters of a Grain, into two Ounces of CHOCOLATE sweetened with *Sugar*.

§. 275. *February* 28, it stood in a warm Digestion ten Hours.

§. 276. *March* 1, it had a warm Digestion nine Hours.

§. 277. *March* 2, it was in a warm Digestion six Hours.

§. 278. *March* 3, it stood in a warm Digestion six Hours.

§. 279. *March* 5, I examin'd, and found it so *soft*, that it easily broke into small Pieces with gently feeling it.

In Digestion 6 Days, 31 Hours of it warm.

EXPERIMENT LXIII.

§. 280. The same Day (§. 267.) I put a *Calculus*, weighing one Grain, into two Ounces of the Decoction of the Shells of *chocolate Nuts*, which is a Liquor commonly called *Coco*.

§. 281. It had exactly the same Time in Digestion with the *Calculus* in the last Experiment, and the same Number of Hours of it warm.

§. 282. *March 5*, I examin'd, and found it *so soft*, that it broke to Pieces in feeling whether it was hard.

§. 283. *Obs.* From these Experiments LXII, LXIII, it appears, that the Liquors we call CHOCOLATE and COCO have a Quality *dissolvent* of the Stone, and are proper Sorts of Aliment for Persons afflicted with it.

## EXPERIMENT LXIV.

§. 284. *February 19*, 1738, I put a *Calculus*, weighing one Grain, and three Quarters, into two Ounces of MILK, and set it in a warm Digestion seven Hours.

*February 20*, it stood in a warm Digestion twelve Hours.

§. 285. *February 21*, it had a warm Digestion eight Hours. In the Evening I examin'd, and found it *dissolved*, but the Substance

Substance of the Milk was coagulated nearly to the Consistence of a Custard.

In Digestion 2 Days and a half, and 27 Hours of it warm.

## EXPERIMENT LXV.

§. 286. *February* 27, 1738-9, I put a *Calculus*, weighing one Grain, into two Ounces of MILK.

*February* 28, it stood in a warm Digestion ten Hours.

*March* 1, it was in a warm Digestion nine Hours.

*March* 2, I gave it a warm Digestion six Hours.

*March* 3, it had a warm Digestion five Hours.

§. 287. *March* 5, I examin'd, and found it so *soft*, that it easily rub'd into a Sand.

In Digestion 6 Days, and 30 Hours of it warm.

§. 288. *Obs.* The Event of these Experiments LXIV, LXV, was surprizing to me,



but it seems to discover a Quality in *Milk* dissolvent of the Stone, and shews, that MILK is one Sort of proper Aliment for Persons afflicted either with the *Stone*, or *Gout*.

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## C H A P. IX.

*Containing an Account of Experiments made with Calculi, and the Juices, and Decoctions of Cabbages, Carrots, Cellery, Cucumbers, and Currants, with suitable Observations.*

## E X P E R I M E N T LXVI.

§. 289. **S** E P T E M B E R 7, 1738, I put the Fragment of a *Calculus*, weighing four Grains and half, into two Ounces of the *Juice* of a common CABBAGE.

§. 290. *September* 18, the eleventh Day of the Digestion, I examin'd it; it appear'd the same in Bulk, and felt *hard*, but a very little sandy Matter came off from it, and stuck to my Fingers in handling it. I set it in a warm Digestion five Hours.

§. 291. *September* 27, I examin'd, and found the Surface of it *soft*, and crumbling with the handling it.

In

In Digestion 20 Days, 5 Hours of it warm.

## EXPERIMENT LXVII.

§. 292. *November* 13, 1738, I put a *Calculus*, weighing three Grains, into three Ounces of a *Decoction* of a common CABBAGE, and set it in a warm Digestion four Hours.

*November* 14, it stood in a warm Digestion seven Hours.

§. 293. *November* 16, I examin'd, and found it softned, but not dissolved.

In Digestion 3 Days, and 11 Hours of it warm,

§. 294. *Obs.* From these Experiments LXVI, LXVII, it appears, that common *Cabbages* have in some Measure a Quality dissolvent of the Stone; because whatever renders a Stone softer, or occasions Sand to come off from it, produces these Effects by weakening, or destroying the Cohesion of the component Parts of the Stone, and therefore Cabbages have a dissolvent Quality, tho' it be not so strong, and active, as in some other Vegetables.

§. 295. *Obs.* I may here observe, that  
putting



putting *Vinegar* to boiled *Cabbage*, and omitting the *Butter*, when we eat it, will render it a more dissolvent Sort of Diet; and indeed more grateful, and easy of Digestion in the Stomach.

## EXPERIMENT LXVIII.

§. 296. *February* 19, 1738-9, I put a *Calculus*, weighing two Grains and three Quarters, into two Ounces of the *Juice* of red CABBAGE, and set it in a warm Digestion seven Hours.

*February* 20, it was in a warm Digestion twelve Hours.

§. 297. *February* 21, it had a warm Digestion eight Hours. In the Evening I examin'd, and found it *hard*.

In Digestion 2 Days and half, and 27 Hours of it warm.

## EXPERIMENT LXIX.

§. 298. The same Day (§. 296.) I put a *Calculus*, weighing three Grains, and a little one weighing about a Quarter of a Grain, into two Ounces of a *Decoction* of red CABBAGE.

CABBAGE. It stood the same Time in Digestion, and the same Hours of it warm with the Stone in the last Experiment ; and I examin'd them at the same Time, and found the little one *dissolved*, and the other *hard*.

§. 299. *Obs.* 1. From these EXPERIMENTS it appears, that the *red Cabbage* has somewhat of a Quality dissolvent of the Stone ; but by Experiment LXVIII, it seems as if the *dissolvent Quality* was latent, and inactive in the *Juice*, and that *decocting* it is necessary to bring that Quality into a State of Activity, Experiment LXIX.

§. 300. *Obs.* 2. From Experiment LXIX, it appears, that the *Decoction* of *red Cabbage* is capable of dissolving some Sorts of *Calculi*, and incapable of producing the same Effect on some others.

§. 301. *Obs.* 3. That *red CABBAGE* boiled is one proper Sort of Aliment for Persons afflicted with the Stone. Because what Virtue is active in the Water wherewith it was boiled, is active also in the Water, or Liquor that remains in the boiled Cabbage, and may be squeezed out of it.

## EXPERIMENT LXX.

§. 302. *November* 13, 1738, I put a *Calculus*, weighing one Grain, into an Ounce and half of the *Juice* of CARROTS, and set it in a warm Digestion four Hours.

*November* 14, it stood in a warm Digestion seven Hours.

§. 303. *November* 16, I examin'd, and found it *hard*, but it seemed to be somewhat diminished in Bulk.

In Digestion 3 Days, and 11 Hours of it warm.

## EXPERIMENT LXXI.

§. 304. The same Day (§. 303.) I put a *Calculus*, weighing one Grain, into one Ounce of a strong *Decoction* of CARROTS, and set it in a warm Digestion four Hours.

*November* 14, it stood in a warm Digestion seven Hours.

§. 305. *November* 16, I examin'd, and found it *softer* than that in the Juice; it broke into Parts, but they felt hard.

In



In Digestion 3 Days, and 11 Hours of it warm.

§. 306. *Obs.* From these EXPERIMENTS it appears, that *Carrots* have somewhat, tho' not much, of the Quality dissolvent of *Calculi*, and consequently, that these Roots boiled may with some Advantage be eaten by Persons troubled with the Stone.

## EXPERIMENT LXXII.

§. 307. *February* 12, 1738-9, I put a *Calculus*, weighing three Grains, into two Ounces of the *Juice* of *blanch'd* CELLERY.

*February* 13, it stood in a warm Digestion ten Hours, and as long the Day following.

§. 308. *February* 15, it had a warm Digestion eight Hours. In the Evening I examin'd it; it was *soft*, and broke into a coarse Sand with feeling it.

In Digestion 3 Days, and 28 Hours of it warm.

EXPERIMENT LXXIII.

§. 309. The same Day (§. 307.) I put a *Calculus*, weighing one Grain, and a Quarter, into one Ounce of a *Decoction* of CELLERY. It had the same Time of Digestion, and the same Assistance of Heat equal to that of the Blood, as the *Calculus* in the last Experiment.

§. 310. *February 15*, I examin'd, and found it much *softened*: Part of it easily divided into small Pieces, or a coarse Sand, but a Part of it remain'd *hard*.

§. 311. *Obs.* From these EXPERIMENTS LXXII, LXXIII, it appears, that both the *Juice* and *Decoction* of CELLERY have a Quality dissolvent of the Stone, very active; and consequently, that Persons afflicted with this Distemper may, to their great Advantage, eat it, both raw, and boiled in Soops.

EXPERIMENT LXXIV.

§. 312. *June 28*, 1738, I put a *Calculus*, weighing one Grain, of a reddish Colour, compact,

compact, and of an irregular Form, into two Ounces of the *Juice* of CUCUMBERS:

§. 313. *July* 1, I examin'd it, and found the Cohesion of its Parts so weaken'd, that with a very little Pressure it broke into a coarse Sand.

In cold Digestion 3 Days.

## EXPERIMENT LXXV.

§. 314. *July* 1, 1738, I put a *Calculus*, weighing seven Grains, into an Ounce and half of fresh *Juice* of CUCUMBERS.

§. 315. *July* 7, I examin'd, and found it so softened, that by a little Pressure it divided into a Sand, and many small Pieces.

In cold Digestion 6 Days.

§. 316. *Obs.* From the Effect of the *Juice* of *Cucumbers* on the *Calculi* in these Experiments LXXIV, LXXV, without the Assistance of Heat, I think it appears very plain that *Cucumbers* have a Quality strongly dissolvent of the *Stone*, and may fitly be eaten as a Remedy against it.



EXPERIMENT LXXVI.

§. 317. *June* 28, 1738, I put a *Calculus*, weighing three Grains, of an oblong Figure, reddish, very hard and smooth, into three Ounces of the *Juice* of *red* CURRANTS, which was very acid, and rough.

*July* 1, I examin'd, and found it as *hard* as ever.

§. 318. *July* 7, I examin'd it again; it broke into two Parts by wiping it with a Cloth; but those Parts were *hard*, and a Pin, by a gentle Pressure, would not enter. They weighed three Grains, so that the *Calculus* was not at all diminished in Weight.

In Digestion 9 Days.

EXPERIMENT LXXVII.

§. 319. *December* 28, 1738, I put a *Calculus*, weighing two Grains and a Quarter, into two Ounces of *red* CURRANT WINE.

*January* 4, it stood in a warm Digestion twelve Hours.

*January* 5, it had a warm Digestion ten Hours.

§. 320. *January 6*, it stood in a warm Digestion six Hours. In the Evening I examin'd it, and found it as *hard* as ever.

In Digestion 9 Days, and 28 Hours of it warm.

## EXPERIMENT LXXVIII.

§. 321. The same Day (§. 319.) I put a *Calculus*, weighing three Grains and a Quarter, into two Ounces and a half of a Mixture made with equal Parts of CURRANT WINE, and *New River Water*: It had 28 Hours of a warm Digestion, at the same Times with the *Calculus* in the last Experiment.

*January 6*, in the Evening I examin'd it, and found it *hard*, and return'd it into the Mixture again.

*January 23*, I examin'd, and found it as *hard* as ever.

In Digestion 26 Days, and 28 Hours of it warm.

## EXPERIMENT LXXIX.

§. 322. *February 12*, 1738-9, I put a *Calculus*, weighing four Grains, and a half, into  
two

two Ounces of a *Decoction* of foreign CURRANTS.

*February* 13, and 14, it stood in a warm Digestion ten Hours each day.

§. 323. *February* 15, it had a warm Digestion eight Hours. In the Evening I examin'd it, it was *soft*, and easily divided into many Pieces, which rub'd into a fine Sand, except one of about a Grain Weight, which was not so soft.

In Digestion 3 Days, and 28 Hours of it warm.

§. 324. *Obs.* 1. That if our *English red* CURRANTS have a Quality dissolvent of the Stone, that Quality is *latent*, or inactive in the Juice of them, and in the Wine made with them. This is evident from Experiments LXXVI, LXXVII, LXXVIII.

§. 325. I confess I was very much disappointed, when I found no Effect produced on the *Calculi*, either by the *Juice* of *Currants*, or the *Wine*, or the *Wine* diluted with *Water*; for I had raised great Expectations from the Strength and Pungency of this vegetable Acid. What might be done by a *Decoction* of the *English* ripe *Currants*,



I cannot say, because I did not think of trying while they were in Season.

§. 326. *Obs.* 2. That the *Decoction* of *foreign* CURRANTS has a Quality dissolvent of the Stone: This appears from Experiment LXXIX, and therefore may profitably be drank, or made with *Oatmeal* into a *Gruel*, for one Sort of Aliment, which Persons troubled with the Stone may use to their Advantage.

## C H A P. X.

*Containing an Account of Experiments made with Calculi and Lettice, Leeks and Onions, with suitable Observations.*

## E X P E R I M E N T LXXX.

§. 327. *JUNE* 28, 1738, I put a small *Calculus*, weighing about half a Grain, into an Ounce of the *Juice* of *Cabbage LETTICE*.

§. 328. *July* 1, I examin'd, and found the Cohesion of the Parts so weakened, that a very little Pressure mashed it into very small Parts.

In Digestion 3 Days.

## E X P E R I M E N T LXXXI.

§. 329. *July* 1, 1738, I put a *Calculus*, weighing ten Grains, into five Ounces of the *Juice* of *Cabbage LETTICE*.

§. 330. *July* 7, I examin'd it, and the  
H 3 gentle

gentle wiping it with a Cloth crumbled it to Pieces, the Union of its Parts were so much dissolved.

In Digestion 6 Days.

## EXPERIMENT LXXXII.

§. 331. *July 28, 1738*, I put a *Calculus*, weighing four Grains, into two Ounces of the *Juice* of *Cabbage LETTICE*.

§. 332. *August 21*, I examin'd, and found it very soft, and easily rub'd into a very fine Powder. One Day it had stood about five Hours in a warm Digestion.

In Digestion 24 Days.

## EXPERIMENT LXXXIII.

§. 333. *July 26, 1738*, I put a *Calculus*, weighing fourteen Grains, into six Ounces of the *Juice* of *Goss LETTICE*.

§. 334. *August 21*, I examin'd, and found it very soft, and easily press'd into a Mash between my Fingers. It had stood one Day about five Hours in a warm Digestion.

In Digestion 26 Days.



## EXPERIMENT LXXXIV.

§. 335. *September 7, 1738*, I put a *Calculus*, weighing four Grains, into four Ounces of the *Juice* of GOSS LETTICE.

*September 18*, it appear'd the same in Bulk, and felt *hard*; but a sandy Matter did a little come off from its Surface, and cleave to my Fingers in handling it. It had stood five Hours in a warm Digestion. I return'd it into the Juice again.

§. 336. *September 27*, I examin'd it again, it appear'd the same in Bulk, felt *hard*, and only a little fine sandy Matter came from it by feeling it.

In Digestion 20 Days.

§. 337. *Obs. 1.* From Experiments LXXX, LXXXI, LXXXII, LXXXIII, it appears, that both the common *Cabbage Lettice*, and *Goss Lettice* have a Quality dissolvent of some Sorts of *Calculi*.

§. 338. *Obs. 2.* That therefore these Herbs, (§. 387.) will make proper *Sallets* for Persons troubled with the Stone.

§. 339. *Obs. 2.* That *Goss Lettice* has

not a Quality dissolvent of every Sort of *Calculi*. This is evident from Experiment LXXXIV.

### EXPERIMENT LXXXV.

§. 340. *June* 28, 1738, I put a small *Calculus*, weighing half a Grain, which was rough and hard, and of a whitish Colour, into two Ounces of the Juice of LEEKS.

§. 341. *July* 1, I examin'd, and found the Stone *dissolved*.

In Digestion 3 Days.

### EXPERIMENT LXXXVI.

§. 342. *July* 1, 1738, I put a *Calculus*, weighing three Grains, and of a reddish Colour, into the Juice used in the last Experiment.

§. 343. *July* 7, I examin'd, and found it *soft*; it crumbled into many Piccees by a very gentle wiping it with a Cloth.

In Digestion 6 Days.

## EXPERIMENT LXXXVII.

§. 344. *July 28, 1738*, I put a *Calculus*, weighing nineteen Grains, into six Ounces of the Juice of LEEKS.

§. 345. *August 21*, I examin'd, and found it *soft*; it crumbled into a Mash by holding it a little close between my Fingers. It had about five Hours of a warm Digestion.

In Digestion 24 days.

## EXPERIMENT LXXXVIII.

§. 346. *September 7, 1738*, I put a *Calculus*, weighing four Grains, into six Ounces of the Juice of the green Part of LEEKS.

§. 347. *September 18*, the eleventh Day of its Digestion, I examin'd it; it appear'd the same in Bulk, and felt *hard*; but from the Surface of it, a little gritty Matter cleaved to my Fingers, which shewed that it was dissolving. I return'd it into the Juice.

§. 348. *September 27*, I examin'd it again, after it had stood five Hours in a warm Digestion; it seem'd to be somewhat diminished



nished in Bulk ; it was *soft*, and pretty easily press'd into a Sand.

In Digestion 20 Days, and 5 Hours of it warm.

## EXPERIMENT LXXXIX.

§. 349. *September 9, 1738*, I put a *Calculus*, weighing two Grains and half, into two Ounces of the Juice of the *white* Part of LEEKS.

§. 350. *September 18*, the ninth Day of its Digestion, I found it the same in Bulk, and Hardness ; and return'd it into the Juice.

§. 351. *September 30*, I examin'd it again, and found the outer Part of it *soft*, and crumbling, when I handled it. It was a harder Sort of Stone than that in the last Experiment. I return'd it into the Juice for a longer Digestion.

§. 352. *October 30*, I set it in a warm Digestion five Hours.

§. 353. *December 27*, I examin'd it, and found it entirely *dissolved* : But I know not how long it had been so, because it happened to be set out of the Way, and neglected.

In Digestion above 15 Weeks.

### EXPERIMENT XC.

§. 354. *December* 29, 1738, I put a *Calculus*, weighing two Grains and a Quarter, into one Ounce of a *Decoction* of the *green* Part of LEEKS.

§. 355. *December* 30, it stood in a warm Digestion ten Hours.

§. 356. *January* 1, I examin'd, and found it broke into small Pieces, and they easily press'd into a very fine Powder.

In Digestion 3 Days, and 10 Hours of it warm.

### EXPERIMENT XCI.

§. 357. The same Day (§. 354.) I put a *Calculus*, weighing seven Grains and three Quarters, into three Ounces of the *Juice* of the *green* Part of LEEKS.

§. 358. *December* 30, it stood in a warm Digestion ten Hours.

§. 359. *January* 1, I examin'd, and found it *hard*, and return'd it into the Juice, and set it in a warm Digestion eight Hours.

*January*

*January 3*, it stood in a warm Digestion nine Hours.

§. 360. *January 4*, I examin'd, and found it *softened*; it broke into two Parts in feeling, whether it was hard, and Sand came from it, and stuck to my Fingers in handling it.

In Digestion 6 Days, and 27 Hours of it warm.

## EXPERIMENT XCII.

§. 361. The same Day (§. 354.) I put a *Calculus*, weighing four Grains, into an Ounce and half of a *Decoction* of the *white Part* of LEEKS.

*December 30*, it stood in a warm Digestion ten Hours.

§. 362. *January 1*, I examin'd it; to View it look'd the same as when put into Digestion; but it was very *soft*, and easily press'd into a Mash.

In Digestion 3 Days, and 10 Hours of it warm.



EXPERIMENT XCIII.

§. 363. *December 29, 1738, I put a Calculus, weighing six Grains, into two Ounces of the Juice of the white Part of LEEKS.*

*December 30, it stood in a warm Digestion ten Hours.*

§. 364. *January 1, I examin'd, and found the Surface of it a little softened. I return'd it into the Juice, and set it in a warm Digestion eight Hours.*

*January 3, it was in a warm Digestion nine Hours.*

§. 365. *January 4, I examin'd, and found it more softened, and Sand came from it, and stuck to my Fingers.*

*In Digestion 6 Days, and 27 Hours of it warm.*

§. 366. *Obs. 1. From the nine last EXPERIMENTS it is very evident, that LEEKS are richly furnished with a Quality dissolvent of the Stone.*

§. 367. *Obs. 2. It will appear by comparing the four last Experiments, that the*  
*Decoction*

*Decoction* of LEEKS is a better Dissolvent than the *Juice* of them : For those four *Calculi* were set in Digestion at the same Time, and stood in the same digestive Heat the first ten Hours, and the Stones in the *Decoctions* were dissolved within three Days ; whereas those in the *Juices* had double the Time of Digestion, and more than double the Time of the digesting Heat, and yet remain'd undissolved, tho' in a dissolving State, and their Surfaces softned.

§. 368. *Obs.* 3. That eating of boiled *Leeks*, and drinking the Liquor in which they are boiled, may contribute much to the dissolving of the Stone, either in the Kidneys, or Bladder.

## EXPERIMENT XCIV.

§. 369. *December* 29, 1738, I put a *Calculus*, weighing twelve Grains and a half, into two Ounces of a strong *Infusion* of LEEKS made in RAISIN *Wine*.

§. 370. *January* 4, it was in a warm Digestion twelve Hours.

*January* 5, it stood in a warm Digestion ten Hours.



§. 371. *January* 6, it had a warm Digestion six Hours. In the Evening I examin'd, and found it hard, and put it again into the *Leek Wine*.

§. 372. *January* 23, I examin'd it again, and found it *hard* without any Alteration.

In Digestion 25 Days, and 28 Hours of it warm.

## EXPERIMENT XCV.

§. 373. The same Day (§. 370.) I put a *Calculus*, weighing nineteen Grains, and a Quarter, into two Ounces of LEAK TEA, made in the Manner of green Tea.

*December* 30, it stood in a warm Digestion ten Hours,

*January* 1, I found it hard, and set it in a warm Digestion eight Hours.

*January* 3, it stood in a warm Digestion nine Hours.

§. 374. *January* 4, I examin'd it; it broke into many small Pieces by gently pressing it with my Finger.

In Digestion 6 Days, and 27 Hours of it warm.



§. 375. *Obs.* 1. From this EXPERIMENT XCIV, it does not appears, that *Leeks*, when infused in Wine, emits into it any Thing of its dissolvent Quality; or is like to contribute any Thing to the Dissolution of the Stone in the Kidneys, or Bladder, if drank for that Purpose; tho', by a diuretick Quality, it has proved beneficial to some hydropical, and leucophlegmatick Persons.

§. 376. *Obs.* 2. That *Leek Tea*, or an *Infusion* of them in Water, may very profitably be drank by Persons, who have *Stones*, either in their Kidneys, or Bladder. This may reasonably be infer'd from the last Experiment, tho' the dissolvent Quality did not appear so strong, as in the Decoction of *Leeks*. *Vid.* Experiment XCII, XCIII.

## EXPERIMENT XCVI.

§. 377. *June* 28, 1738, I put a *Calculus*, of a reddish brown Colour, very smooth and compact, weighing three Grains, into two Ounces of the *Juice* of ONIONS.

§. 378. *July* 1, there appear'd no Alteration. I added to the Juice one Drachm of hard SOAP.

§. 379. *July* 7, I examin'd it; when it felt *hard*, but look'd much whiter, and weighed,  
when

when dry, but two Grains. So that it was diminished in Weight one Third.

In Digestion 9 Days.

## EXPERIMENT XCVII.

§. 380. *December 7, 1738*, I put a *Calculus*, weighing ten Grains, into three Ounces of the *Juice* of ONIONS.

§. 381. *September 18*, (the eleventh Day of its Digestion) it appear'd the same in Bulk, felt *hard*; only in feeling it, a little sandy Matter came off from the Surface of it, and cleaved to my Fingers: An Argument that the Juice had some Effect on the Stone, and destroyed or weakened the Cohesion of some of the exterior component Particles of it.

§. 382. *September 27*, I found it much in the same State. It had one Day a warm Digestion about five Hours.

In Digestion 20 Days, and only 5 Hours of it warm.

## EXPERIMENT XCVIII.

§. 383. *November 13, 1738*, I put a *Calculus*, weighing two Grains, into an  
I Ounce



Ounce and half of the *Juice* of ONIONS, and set it in a warm Digestion four Hours.

*November 14*, it stood in a warm Digestion seven Hours.

§. 384. *November 16*, I examin'd, and found it *softened*; it broke between my Fingers in feeling it, but the Parts felt *hard*. I return'd them into the Juice, and left them in a cold Digestion.

§. 385. *December 27*, I examin'd, and found the broken *Calculus* diminished in Bulk above three Fourths, but the Remainder felt *hard*.

In Digestion 44 Days, and only 11 Hours of it warm.

## EXPERIMENT XCIX.

§. 386. *December 29*, 1738, I put a *Calculus*, weighing one Grain, into one Ounce of the *Juice* of ONIONS.

*January 4*, it stood in a warm Digestion twelve Hours.

*January 5*, it had a warm Digestion ten Hours.

§. 387. *January 5*, it was in a warm Digestion six Hours. In the Evening I examin'd,



*Experiments made with Calculi, &c.* 115  
min'd, and found it *soft* ; it broke in Pieces with handling it.

In Digestion 7 Days, and 28 Hours of it warm.

§. 388. *Obs.* From these EXPERIMENTS XCVI, *ad* XCIX, it appears, that ONIONS have a Quality dissolvent of the Stone, tho' not very active in its Juice.

### EXPERIMENT C.

§. 389. *December* 29, 1738-9, I put a *Calculus*; weighing eight Grains; into two Ounces and a half of a Mixture of equal Parts of the *Juice* of ONIONS, and *New River Water*.

*January* 4, it was in a warm Digestion twelve Hours.

*January* 5, it had a warm Digestion ten Hours.

§. 390. *January* 6, it stood in a warm Digestion six Hours. In the Evening I examin'd, and found the Cohesion of its Parts very much destroyed ; for it easily crumbled into Pieces in feeling it ; but some of the Pieces felt hard.

## 116. *Experiments made with Calculi, &c.*

In Digestion 8 Days, and 28 Hours of it warm.

§. 391. *Obs.* From this Experiment (§. 389, &c.) it appears, that the *Juice* of *Onions* is a more powerful Dissolvent, when diluted with Water, than it is by itself. And therefore that they, who would use the Juice of *Onions* to the End of communicating a Quality to their Urine dissolvent of the Stone in their Kidneys or Bladder, should always mix an equal Part of Water with it; and by this Method they may avoid heating their Blood, and stimulating the Solids too much, and at the same Time more effectually obtain the Advantage they desire.

### EXPERIMENT CI.

§. 392. *September* 30, 1738, I put two *Calculi*, weighing somewhat more than one Grain each, into two Ounces of a *Decoction* of *ONIONS*.

§. 393. *October* 7, the seventh Day of the Digestion, I examin'd, and found them much *softened*, for they easily divided into  
Parts.

Parts with the handling them. I put them again into the *Decoction*.

§. 394. *October* 23, I examin'd them again ; to View they appear'd the same as when return'd into the *Menstruum*, but when felt, were *soft* as Jelly.

In Digestion 23 Days.

## EXPERIMENT CII.

§. 395. *December* 28, 1738, I put a *Calculus*, of a light brown Colour, and somewhat of a triangular Form, weighing six Grains, into an Ounce and half of a *Decoction* of ONIONS.

*December* 30, it stood in a warm Digestion ten Hours.

*January* 1, it had a warm Digestion eight Hours.

§. 396. *January* 3, it was in a warm Digestion nine Hours.

§. 397. *January* 4, I examin'd, and found it *hard*.

In Digestion 7 Days, and 27 Hours of it warm.

§. 398. *Obs.* From these two Experiments



(§. 392, *ad* 397.) it appears, that the *Decoc-tion* of ONIONS can well dissolve some Sorts of *Calculi*, and that there are others on which it may have no Effect.

### EXPERIMENT CIII.

§. 399. The same Day (§. 395.) I put a rough, whitish brown *Calculus*, weighing five Grains, into two Ounces of ONION TEA, made in the same Manner as the common *Infusion* of green Tea.

§. 400. It had the same Time of Digestion, and the same Number of Hours in the same warm Digestion with the *Calculus* in the last Experiment.

§. 401. *January* 4, I examin'd, and found it *hard*.

### EXPERIMENT CIV.

§. 402. The same Day (§. 395.) I put a *Calculus*, of an oblong Figure, and of a reddish brown Colour, weighing eight Grains, into two Ounces of ONION TEA, made with the Addition of some *Nutmeg*.

§. 403. It stood the same Time in digest-  
ing,

ing, and the same Hours of it warm, with the *Calculi* in Experiment CII, CIII.

§. 404. *January* 4, I examin'd, and found it *hard*.

§. 295. *Obs.* From the two last EXPERIMENTS it does not appears, that the *Infusion* of *Onions* has any Thing of the Quality dissolvent of the Stone, and therefore that the drinking *Onion Tea* is not like to avail any Thing to the Dissolution of it.

## C H A P. XI.

*Containing an Account of Experiments made with Calculi, and the Juices, and Decoctions of Parsnips, Parsley, Potatoes, Peas, and Radishes ; with suitable Observations.*

## E X P E R I M E N T C V.

§. 406. *FEBRUARY* 19, 1738-9, I put a *Calculus*, of a very red Colour, weighing two Grains, and another of a whitish Brown, of about the Weight of one Quarter of a Grain, into an Ounce of the *Juice* of PARSNIPS ; and set it in a warm Digestion seven Hours.

§. 407. *February* 20, they stood in a warm Digestion twelve Hours.

§. 408. *February* 21, they had a warm Digestion eight Hours. In the Evening I examin'd them, and found the little Stone *dissolved*, and the other *hard* ; but Sand  
came



came off from its Surface, which shew'd a Dissolution of it began.

In Digestion 36 Hours, and 27 of them warm.

## EXPERIMENT CVI.

§. 409. The same Day (§. 406.) I put a *Calculus*, of a grey or Lead Colour, weighing two Grains, and a little one of a whitish brown Colour, about a Quarter of a Grain in Weight, into two Ounces of a *Decoc-tion* of PARSNIPS. They had the same Digestion, and Degree and Time of Heat with the Stones in the last Experiment.

§. 410. *February* 21, in the Evening I examin'd them, and found the little Stone so *soft*, that it broke into a coarse Sand in feeling it; but the larger one was *hard*.

§. 411. *Obs.* 1. From these EXPERIMENTS it appears, that PARSNIPS have a Quality dissolvent of some *Calculi*.

§. 412. *Obs.* 2. That the dissolvent Quality is active in the Juice, as well as in the Decoction of *Parsnips*, which can't be said of several Vegetables.

§. 413. *Obs.* 3. That boiled *Parsnips* is a Sort of Aliment proper for Persons afflicted with the Stone.

## EXPERIMENT CVII.

§. 414. *December* 29, 1738, I put a *Calculus*, weighing one Grain and a Quarter, into two Ounces of a TEA made with the *Roots* of PARSLEY.

§. 415. *January* 4, it stood in a warm Digestion twelve Hours.

§. 416. *January* 5, it had a warm Digestion ten Hours.

§. 417. *January* 6, it was in a warm Digestion six Hours. In the Evening I examin'd, and found it *hard*, and return'd it into the *Tea*.

§. 418. *January* 23, I examin'd it again, and found it as *hard* as ever.

In Digestion 25 Days, and 27 Hours of it warm.

## EXPERIMENT CVIII.

§. 419. The same Day, (§. 414.) I put a *Calculus*, weighing one Grain, and a Quarter,

ter, into an Ounce and half of a *Decoction* of the *Roots* of PARSLEY.

§. 420. It stood the same Time in Digestion with the *Calculus* in the last Experiment, and as many Hours of it warm.

§. 421. *January* 6, I examin'd it, and found a little of the Outside *soft*, and return'd it into the *Decoction*.

§. 422. *January* 23, I examin'd it again ; it came out of the Liquor whole, but broke into very small Pieces with handling it.

§. 423. *Obs.* 1. It seems from Experiment CVII, that the dissolvent Quality of *Parsley Roots* is not extracted by that Degree of Heat, which is commonly used in making *Tea*.

§. 424. *Obs.* 2. That the *Decoction* of *Parsley Roots* has the *dissolvent* Quality, and therefore may properly be drank as one Sort of Liquor for communicating a dissolvent Quality to the Urine of Persons afflicted with the Stone.



## E X P E R I M E N T C I X.

§. 425. *December 29, 1738, I put two Calculi, weighing together one Grain, and a Quarter, into two Ounces and half of a Tea made with the Leaves of PARSLEY.*

§. 426. *It had the same Hours of a warm Digestion with the Calculi in the two last Experiments.*

§. 427. *January 6, I examin'd them ; the larger was hard, the lesser so softened, that it broke into Pieces with handling it ; but they felt hard. I return'd them into the Tea.*

§. 428. *January 23, I examin'd again, and found them so soft, that they broke into a coarse Sand in feeling them.*

## E X P E R I M E N T C X.

§. 429. *The same Day (§. 425.) I put a Calculus, weighing two Grains, into two Ounces and half of a Decoction of the Leaves of PARSLEY.*

§. 430. *December 30, it stood in a warm Digestion ten Hours.*

§. 431.

§. 431. *January* 1, it was in a warm Digestion eight Hours.

§. 432. *January* 3, it had a warm Digestion nine Hours.

§. 433. *January* 4, I examin'd, and found it *soft*; it broke into many Pieces.

In Digestion 6 Days, and 27 Hours of it warm.

§. 434. *Obs.* 1. That the dissolvent Quality is much more active in the *Decoction*, than in the *Infusion* of PARSLEY Leaves. Consequently,

§. 435. *Obs.* 2. That Persons, who have the Stone should drink the Decoction rather than the Infusion of the *Leaves* of PARSLEY.

## EXPERIMENT CXI.

§. 436. *November* 13, 1738, I put a *Calculus*, weighing one Grain, into two Ounces and half of the *Juice* of POTATOES, and set it in a warm Digestion four Hours.

§. 437. *November* 14, it had a warm Digestion seven Hours.

§. 438. *November* 16, I examin'd, and found it *softened*; it pretty easily broke into  
Pieces

Pieces with feeling it ; but those Pieces felt *hard*.

In Digestion 3 Days, and 9 Hours of it warm.

## EXPERIMENT CXII.

§ 439. The same Day (§. 436.) I put a *Calculus*, weighing one Grain and a Quarter, into two Ounces of the *Decoction* of POTATOES, and set it in a warm Digestion four Hours.

§. 440. It was in a warm Digestion seven Hours the Day following.

§. 441. *November* 16, I examin'd it, and found it *softer* than that in the Juice, but not entirely dissolved.

§. 442. *Obs.* From these Experiments CXI, CXII, it appears, that POTATOES have a Quality dissolvent of the Stone ; and consequently are one Sort of proper Aliment for Persons afflicted with it.

## EXPERIMENT CXIII.

§. 443. *February* 12, 1738-9, I put a *Calculus*



*culus*, weighing one Grain, into two Ounces of a *Decoction* of common white PEAS.

§. 444. *February* 13, it stood in a warm Digestion ten Hours.

§. 445. *February* 14, it had a warm Digestion ten Hours.

§ 446, *February* 15, it was in a warm Digestion eight Hours. In the Evening I examin'd, and found it as *hard* as ever.

In Digestion 3 Days, and 28 Hours of it warm.

§. 447. *Obs.* It does not from this EXPERIMENT appear, that PEAS have any Thing of the dissolvent Quality we are seeking after; and that Persons afflicted with the Stone, have as yet no Reason to expect any Advantage against their Distemper by eating them, tho' for the End of Nutrition they are useful.

## EXPERIMENT CXIV.

§. 448. *October* 13, 1738, I put a *Calculus*, weighing one Grain, into two Drachms of the *Juice* of the *Roots* of Garden RADISHES.

§. 449. *October* 23, the tenth Day of its standing in a cold Digestion, I examin'd, and  
found

found the Outside of it *softened*, and return'd it into the Juice.

§. 450. *October 30*, I gave it a warm Digestion five Hours.

§. 451. *November 4*, I examin'd, and found it so much *softer*, that it crumbled into a fine Sand by feeling it, except a little Bit in the Center, which remain'd *hard*.

In Digestion 22 Days, and 5 Hours of it warm.

## EXPERIMENT CXV.

§. 452. *January 29, 1738-9*, I put a *Calculus*, weighing three Grains, into two Ounces of a *Decoction* of the *Roots* of Garden RADISHES, and set it in a cold Digestion.

§. 453. *February 9*, the eleventh Day of its Digestion, I examin'd, and found it *hard*, and return'd it into the *Decoction*.

§. 454. *February 19*, I gave it a warm Digestion seven Hours.

§. 455. *February 20*, it stood in a warm Digestion twelve Hours.

§. 456. *February 21*, it had a warm Digestion eight Hours. In the Evening I examin'd,

amin'd, and found it *dissolved* into a rough Sand.

In Digestion 23 Days, and 27 Hours of it warm.

## EXPERIMENT CXVI.

§. 457. *January* 26, 1738-9, I put a *Calculus*, weighing three Quarters of a Grain, into two Ounces of a *small Decoction* of the Roots of HORSE-RADISH.

§. 358. *February* 1, it had a warm Digestion four Hours.

§. 459. *February* 3, it stood six Hours in a warm Digestion.

§. 460. *February* 6, it was in a warm Digestion three Hours.

§. 461. *February* 9, I examin'd, and found it *hard*.

In Digestion 14 Days, and 13 Hours of it warm.

## EXPERIMENT CXVII.

§. 462. The same Day (§. 457.) I put a *Calculus*, weighing three Quarters of a Grain,  
K into



into two Ounces of a strong *Decoction*, of the same Roots, (§. 457.)

§. 463. It stood 14 Days in Digestion, and 13 Hours of it warm. I examin'd it *February* 9, and found it as *hard* as ever.

§. 464. *Obs.* 1. From Experiments CXIV, CXV, it appears, that *Garden RADISHES* have a *Quality dissolvent* of the *Stone*, and may fitly be eaten by Persons afflicted with it, for communicating the same *Quality* to their *Urine*.

§. 465. *Obs.* 2. From Experiments CXIV, CXV, we may infer, that Persons afflicted with the *Stone* may to their Advantage drink a *Decoction* of *Garden Radishes*.

§. 466. *Obs.* 3. From Experiments CXVI, CXVII, it does not appear that *Horse-Radish*, tho' it consists of more pungent Particles, has a *Quality dissolvent* of the *Stone*.

## C H A P. XII.

*Containing an Account of Experiments made with Calculi, and Raisins of the Sun ; also with Figs, Spinach, Sorrel, and Oranges ; with suitable Observations.*

## E X P E R I M E N T CXVIII.

§. 467. **F**EBRUARY 12, 1738-9, I put a *Calculus*, weighing four Grains and a half, into two Ounces of a *Decoction* of RAISINS of the Sun.

§. 468. *February* 13, it stood in a warm Digestion ten Hours.

§. 469. *February* 14; it was in a warm Digestion ten Hours.

§. 470. *February* 15, it was in a warm Digestion eight Hours. In the Evening I examin'd, and found it much *softened*. It easily broke into Pieces, and most of them easily rub'd into a Sand.

In Digestion 3 Days, and 28 Hours of it warm.

## E X P E R I M E N T CXIX.

§. 471. *February* 12, 1738-9, I put a *Calculus*, weighing seven Grains and a Quarter, into two Ounces of a *Decoction* of FIGS.

*February* 13, and 14, it was in a warm Digestion ten Hours each Day.

§. 472. *February* 15, it stood in a warm Digestion eight Hours. In the Evening I examin'd, and found it *softened*; it broke into Pieces by a gentle feeling it. I return'd them into the *Decoction*.

§. 473. *February* 21, I examin'd, and found them much *softened*, but not totally *dissolved*.

In Digestion 3 Days, and 28 Hours of it warm.

§. 474. *Obs.* 1. From Experiments CXVIII, CXIX, it appears, that both *Raisins*, and *Figs* have a Quality dissolvent of the Stone, and that a *Decoction* of them may profitably be drank by Persons afflicted with it.

§. 475. *Obs.* 2. Hence also we may understand, how or on what Ground we may think



think that *Decoctions* of *Raisins*, or *Figs* are good *pectoral* Drinks, proper for Persons under Disorders of the Lungs and Breast; because we may easily apprehend, that Liquors, which have a Power capable of dissolving stony Concretions, or that strong Cohesion that is between the *alkaline Salts*, and *animal Oil*, &c. which help to constitute a *Calculus*, may well dissolve the weaker Cohesion, which may happen between those Sorts of Particles, while diffused in, and circulating with the Blood, to the Production of morbid Symptoms of the *Thorax*.

## EXPERIMENT CXX.

§. 476. *November* 13, 1738, I put a *Calculus*, weighing one Grain, into one Ounce of the *Juice* of SPINACH, and set it in a warm Digestion four Hours.

§. 477. *November* 14, it had a warm Digestion seven Hours.

§. 478. *November* 16, I examin'd, and found the Stone *hard*, and the Juice in Part coagulated.

In Digestion 3 Days, and 11 Hours of it warm.

## EXPERIMENT CXXI.

§. 479. The same Day (§. 476.) I put a *Calculus*, weighing one Grain, into an Ounce of a *Decoction* of SPINACH.

§. 480. It had the same Time of Digestion, and the same Hours of it warm, with the *Calculus* in the last Experiment.

§. 481. November 16, I examin'd, and found it as *kard* as ever.

§. 482. *Obs.* It does not appear from these Experiments, that SPINACH has any Thing of a Quality dissolvent of the Stone.

## EXPERIMENT CXXII.

§. 483. June 28, 1738, I put a *Calculus*, weighing ten Grains, into three Ounces of the *Juice* of common SORREL.

§. 484. July 3, it stood in a warm Digestion about eight Hours.

§. 485. July 5, it was in a warm Digestion about nine Hours.

§. 486. July 7, I examin'd it, and found it somewhat diminished in Bulk, and so much

much *softened*, that a Pin pretty easily passed thro' it; but in passing thro' it, Part of the outer *Lamin* broke into several Pieces. It weighed dry eight Grains; diminished in Bulk a fifth Part.

In Digestion 9 Days, and about 27 Hours of it warm.

### EXPERIMENT CXXIII.

§. 487. *July* 28, 1738, I put a *Calculus*, weighing eight Grains and half, into four Ounces of the *Juice* of common *SORREL*.

§. 488. *August* 24, I examin'd, and found it very *soft*. One Day it had a warm Digestion five Hours.

In Digestion 27 Days, and 5 Hours of it warm.

§. 489. *Obs.* 1. From these Experiments CXXII, CXXIII, it appears, that common *Sorrel* has a Quality *dissolvent* of the Stone.

§. 490. *Obs.* 2. That its dissolvent Quality is very active in the *Juice* of this Plant, which cannot be said of divers *Vegetables*, which make good DISSOLVENTS by *Decoction*.



§. 491. *Obs.* 3. That *Sorrel* may be very useful to Persons afflicted with the Stone, either in *Sallet*, or for making Decoctions.

## EXPERIMENT CXXIV.

§. 492. *June* 28, 1738, I put a *Calculus*, weighing one Grain, into two Ounces of the *Juice* of the *Wood SORREL*.

§. 493. *July* 7, I examin'd, and found it *dissolved* into a Powder.

In Digestion 9 Days.

§. 494. *Obs.* From this EXPERIMENT CXXIV, it appears, that *Wood SORREL* is a good Dissolvent of some Sorts of *Calculi*.

## EXPERIMENT CXXV.

§. 495. *December* 28, 1738, I put a *Calculus*, weighing three Grains, into one Ounce of the *Juice* of *Seville ORANGES*.

§. 496. *January* 4, it had a warm Digestion twelve Hours.

§. 497. *January* 5, it stood in a warm Digestion ten Hours.

§. 498.

§. 498. *January* 6, it was in a warm Digestion six Hours. In the Evening I examin'd, and found it *hard*, and return'd it into the Juice.

§. 499. *January* 23, I examin'd, and found it as *hard* as ever.

In Digestion 26 Days, and 28 Hours of it warm.

## EXPERIMENT CXXVI.

§. 500. *January* 26, 1738-9, I put a *Calculus*, weighing four Grains, into one Ounce of the *Juice* of *Seville* ORANGES.

§. 501. *February* 1, it had a warm Digestion six Hours.

§. 502. *February* 3, it stood in a warm Digestion four Hours.

§. 503. *February* 6, it was in a warm Digestion three Hours.

§. 504. *February* 9, I examin'd it; when it appear'd whole, but was *soft*, and easily press'd into a Mash.

In Digestion 14 Days, and 13 Hours of it warm.

## EXPERIMENT CXXVII.

§. 505. The same day (§. 500.) I put a *Calculus*, weighing three Quarters of a Grain, into two Ounces of a Mixture of equal Parts of the *Juice* of *Seville* ORANGES, and *New River Water*.

§. 506. *January* 31, I examin'd it, and found it *dissolved*.

In cold Digestion 5 days.

## EXPERIMENT CXXVIII.

§. 507. *January* 31, 1738-9, I put a *Calculus*, weighing five Grains and a half, into the same Mixture used in the last Experiment.

§. 508. It had a warm Digestion *February* 1, 3, 6, the same Hours with the *Calculus* in Experiment CXXVI.

§. 509. *February* 9, I examin'd, and found it *dissolved*, tho' to View, before I felt it, it appear'd whole.

In Digestion 9 Days, and 13 Hours of it warm.



EXPERIMENT CXXIX.

§. 510. *January 26, 1738-9, I put a Calculus, weighing two Grains, into two Ounces of the Juice of China ORANGES.*

§. 511. *January 31, I examin'd, and found it dissolved.*

*In cold Digestion 5 Days.*

EXPERIMENT CXXX.

§. 512. *January 31, 1738-9, I put a Calculus, weighing six Grains, into the same Juice used in the last Experiment. It stood in a warm Digestion the same Hours with the Calculus in Experiment CXXVI.*

§. 513. *February 9, I examin'd, and found it so softened, as easily to divide into small rough Pieces; but they felt hard.*

*In Digestion 9 days, and 13 Hours of it warm.*

EXPERIMENT CXXXI.

§. 514. *January 26, 1738-9, I put a Calculus, weighing one Grain and a Quarter, into*

into one Ounce of a Mixture of equal Parts of the Juice of *China* ORANGES, and *New River Water*. It was in a warm Digestion the same Hours with the *Calculus* in Experiment CXXVI.

§. 515. *February 9*, I examin'd, and found it *hard*.

In Digestion 14 days, and 13 Hours of it warm.

§. 516. *Obs. 1.* From these Experiments CXXV, *ad* CXXXI, it is evident, that both the *Seville* and *China* ORANGES have a Quality dissolvent of some *Calculi*.

§. 517. *Obs. 2.* That the dissolvent Quality is active in the *Juices* of these Fruits unmixed, as well as when diluted with Water.

§. 518. *Obs. 3.* That therefore Persons afflicted with the Stone, may to their Advantage use these Fruits with other Aliments endowed with a like Quality.

## C H A P. XIII.

*Containing an Account of Experiments made with Calculi, and Mallows, Oatmeal, Pearl Barley, Wheat, Rice, Millet Seeds, Barley, Malt and Hops ; with suitable Observations.*

## E X P E R I M E N T CXXXII.

§. 519. *J*ULY 5, 1738, I put a *Calculus*, weighing eleven Grains, into the *Juice* of the *Leaves* of common MALLOWs.

§. 520. *July* 7, I examin'd, and found it *softened* ; for it broke by a gentle wiping it, and a Pin easily enter'd it.

In Digestion 2 Days.

## E X P E R I M E N T CXXXIII.

§. 521. The same Day (§. 519.) I put a *Calculus*, weighing nine Grains, into MALLOW Gruel.

§. 522.



§. 522. *July 7*, I examin'd, and found one Corner of it *softened*.

In Digestion 2 Days.

### EXPERIMENT CXXXIV.

§. 523. *November 13*, 1738, I put a *Calculus*, weighing one Grain, into three Ounces of a strong *Decoction* of MALLOW *Leaves*, and set it in a warm Digestion four Hours.

*November 14*, it stood in a warm Digestion seven Hours.

§. 524. *November 16*, I examin'd, and found the Surface of it *softened*; but the Stone not dissolved.

### EXPERIMENT CXXXV.

§. 525. The same Day (§. 523.) I put a *Calculus*, weighing one Grain, into two Ounces of WATER GRUEL, and set it in a warm Digestion four Hours.

*November 14*, it stood in a warm Digestion seven Hours.

§. 526. *November 16*, I examin'd, and found it *hard*.

In

In Digestion 3 Days, and 11 Hours of it warm.

§. 527. *Obs.* From Experiments CXXXII, CXXXIII, CXXXIV, it appears, that MALLOWS, though a soft, mucilaginous Plant, has a Quality conducive to the Dissolution of some *Calculi*; and therefore may with Advantage be used in *Decoction*, or in *Gruel*, by Persons troubled with the *Stone*; and may do Service not only by relaxing the urinary Passages, but by Particles endowed with a dissolvent Quality. And as all Plants have a *Salt*, so this may have saline Particles, tho' not so pungent as sensibly to affect the Taste, as many other Plants have, yet so subtile as, by attracting, or being attracted by Particles of the *Calculus*, when brought to a Juxta-Position, may weaken their Cohesion, and promote their Dissolution.

## EXPERIMENT CXXXVI.

§. 548. *February* 12, 1738-9, I put a *Calculus*, weighing one Grain, into two Ounces of a *Decoction* of whole OATMEAL.

§. 529.

§. 529. *February* 13, it stood in a warm Digestion ten Hours.

§. 530. *February* 14, it was in a warm Digestion ten Hours.

§. 531. *February* 15, it stood in a warm Digestion eight Hours. In the Evening I examin'd, and found it *soft*; it broke into a coarse Sand with feeling it. I must observe here, that tho' the Stone was small, yet it was one of the hardest Sort I have yet met with.

In Digestion 3 Days, and 28 Hours of it warm.

## EXPERIMENT CXXXVII.

§. 532. The same Day (§. 528.) I put a *Calculus*, weighing five Grains, into two Ounces of *New River Water*, (in which ground *Oatmeal* had been mixed, and steeped all the preceding Night, and stirred together in the Morning, and in which the *Oatmeal* had subsided) to which I added a Tea Spoonful of *Honey*.

§. 533. *February* 13, I set it in a warm Digestion ten Hours.

*February*



*February* 14, it was in a warm Digestion ten Hours.

§. 534. *February* 15, it stood in a warm Digestion eight Hours. In the Evening I examin'd, and found it *hard*.

## EXPERIMENT CXXXVIII.

§. 535. *February* 19, 1738-9, I put a *Calculus*, weighing one Grain, into two Ounces of a cold *Infusion* of OATMEAL, sweetned with two Tea Spoonfuls of *Honey*, and a small Fragment of another Stone, about one Fourth of a Grain in Weight, and set them in a warm Digestion seven Hours.

§. 536. *February* 20, they stood in a warm Digestion twelve Hours.

§. 537. *February* 21, they had a warm Digestion eight Hours. In the Evening I examin'd, and found them both *hard*.

In Digestion 2 Days and half, and 27 Hours of it warm.

§. 538. *Obs.* 1. It does not appear by Experiments CXXXVII, CXXXVIII, that the *Infusion* of OATMEAL can contribute any Thing towards the dissolving of the Stone.

§. 539. *Obs.* 2. That Experiments CXXXV, CXXXVI, give us some Reason to hope, that the *Decoction* of OATMEAL, that is, *Water Gruel*, may prove beneficial to Persons afflicted with the Stone, and is one Sort of Aliment very proper for them.

## EXPERIMENT CXXXIX.

§. 540. *February* 19, 1738-9, I put a *Calculus*, weighing one Grain, with the Fragment of another weighing a Quarter of a Grain, into two Ounces of a *small Decoction* of PEARL BARLEY, (which some call the *first Water*, and throw it away when they make Barley Water) and set it in a warm Digestion seven Hours.

§. 541. *February* 20, they had a warm Digestion twelve Hours.

§. 542. *February* 21, they were eight Hours in a warm Digestion. In the Evening I examin'd them; the Fragment was so *soft*, that it broke into Sand with feeling it; and the other broke into two Parts, but they were *hard*.

In Digestion 2 Days and half, and 27 Hours of it warm.

EXPERIMENT CXL.

§. 543. The same Day (§. 540.) I put a *Calculus*, weighing three Quarters of a Grain, together with a small Fragment of another (of the same Bulk with that in the last Experiment) into two Ounces of a stronger *Decoction* of PEARL BARLEY.

§. 544. They had the same Digestion cold and warm with the *Calculi* in the last Experiment.

§. 545. *February* 21, I examin'd them, and found them both *hard*; but Sand came from the larger, which shewed it to be in a dissolving State.

§. 546. *Obs.* 1. These Experiments discover, that there is somewhat of a dissolvent Quality in *Pearl Barley*.

§. 547. *Obs.* 2. Hence we may infer, that *Pearl Barley* boiled is a proper Food, and that *Barley Water* is a suitable Drink for Persons afflicted with the Stone.



## E X P E R I M E N T C X L I.

§. 548. *February* 12, 1738-9, I put a *Calculus*, weighing one Grain, into an Ounce and half of a *Decoction* of WHEAT.

§. 549. *February* 13, it had a warm Digestion ten Hours.

§. 550. *February* 14, it was ten Hours in a warm Digestion.

§. 551. *February* 15, it stood in a warm Digestion eight Hours. In the Evening I examin'd, and found it *hard*.

In Digestion 3 Days, and 28 Hours of it warm.

## E X P E R I M E N T C X L I I.

§. 552. The same Day, (§. 548.) I put a *Calculus*, weighing one Grain, into two Ounces of a *Decoction* of RICE.

§. 553. It stood the same Time in a cold and warm Digestion with the *Calculus* in the last Experiment.

§. 554. *February* 15, in the Evening I examin'd, and found it *soft*. It broke into many Pieces by gently feeling it.

### EXPERIMENT CXLIII.

§. 555. The same Day (§. 548.) I put two *Calculi*, weighing together one Grain, into two Ounces of the *Decoction* of MILLET SEEDS.

§. 556. They stood equal Time in cold and warm Digestion with the *Calculus* in Experiment CXLI.

§. 557. *February* 15, I examin'd, and found them both *hard*.

§. 558. *Obs.* 1. It appears from Experiment CXLII, that *Rice* has a Quality dissolvent of the *Stone*, and is one Sort of proper Food for Persons afflicted with it.

§. 559. *Obs.* 2. It does not appear, that *Wheat*, or *Millet Seeds* can contribute any Thing to the Dissolution of the Stone. Experiment CXLI, CXLIII.

### EXPERIMENT CXLIV.

§. 560. *February* 12, 1738-9, I put two very small *Calculi*, weighing together one  
L 3 Grain,

Grain, into two Ounces of a *Decoction* of BARLEY.

§. 562. *February* 13, they were in a warm Digestion ten Hours.

§. 562. *February* 14, they stood ten Hours in a warm Digestion.

§. 563. *February* 15, they had a warm Digestion eight Hours. In the Evening I examin'd, and found them both *hard*.

In Digestion 3 Days, and 28 Hours of it warm.

## EXPERIMENT CXLV.

§. 564. The same Day (§. 560.) I put a *Calculus*, weighing one Grain, into two Ounces of a *Decoction* of MALT.

§. 565. It had the same Digestion cold, and warm with the *Calculi* in the last Experiment.

§. 566. *February* 15, I examin'd, and found it *hard*.

§. 567. *Obs.* It does not appear from these EXPERIMENTS, that either *Malt*, or *Barley*, has any Thing of a Quality dissolvent of the Stone.



## EXPERIMENT CXLVI.

§. 568. The same Day (§. 560.) I put two small *Calculi*, into two Ounces of a *Decoction* made by boiling MALT, and HOPS together.

§. 569. They had the same Digestion, both cold and warm with the *Calculi* in Experiment CXLIV.

§. 570. *February* 15, I examin'd them, and found one of them *dissolved*, and the other *hard*.

§. 571. *Obs.* 1. That there is Reason to think the Dissolution of one of the *Calculi* in this Experiment CXLVI, resulted from the Quality which the *Hops* imparted to the *Decoction*; because by Experiment CXLVII, *infra*, it appears, that Hops have a Quality dissolvent of the Stone; and because in Experiments CXLIV, CXLV, *Barley* and *Malt* discover'd no such Quality.

§. 572. *Obs.* 2. That, if we consider the Event of this Experiment CXLVI, with that of the Experiment made with the *Decoction* of *Hops*, we may see Reason to think, that

the more bitter of the Hops any Malt Liquor is, the safer it is for Persons afflicted with the Stone.

§. 573. *Obs.* 3. That the different Event of this Experiment CXLVI, on the two *Calculi* could be owing to nothing, but some Difference in their Contexture.

## EXPERIMENT CXLVII.

§. 574. *February* 12, 1738-9, I put a *Calculus*, weighing five Grains and three Quarters, into two Ounces of a *Decoction* of Hops.

§. 575. *February* 13, it stood in a warm Digestion ten Hours.

§. 576. *February* 14, it was in a warm Digestion ten Hours.

§. 578. *February* 15, it had a warm Digestion eight Hours. In the Evening I examin'd it, when to View it appear'd the same as it did before it was put into the *Decoction*, but felt soft, easily broke, and rub'd into a fine Sand.

In Digestion 3 Days, and 28 Hours of it warm.

§. 579. I must here observe, that this *Calculus* was taken from one of the hardest Sorts that have come to my Hands.

§. 580. *Obs.* 1. From this EXPERIMENT it appears, that *Hops* have a Quality dissolvent of the Stone, very strong and active; and therefore that a *Decoction* of them may be a good Remedy against the Stone.

§. 581. *Obs.* 2. That *Hops* (on the Account of their dissolvent Quality) are a necessary Ingredient in making *Malt* Liquors; necessary for diminishing that *viscid* Quality, which is natural to all Liquors made of *Malt*; especially of that which is *pale*, and to render them more wholesome, or, in other, and, it may be, more proper Words, less prejudicial to Health; and likewise necessary on the Account that neither *Barley*, nor *Malt*, by the Experiments CXLIV, CXLV, have discovered any dissolvent Quality.



## C H A P. XIV.

*Containing an Account of Experiments made with Calculi, and divers Sorts of Wine, foreign, and home made ; particularly with Red Port, Tent, Medera, Canary, white Port, Rhenish, and Mountain ; also with Elderberry, and Raifin Wines ; likewise with Cyders of various Sorts ; with suitable Observations.*

## E X P E R I M E N T CXLVIII.

§. 582. *JANUARY* 26, 1738-9, I put a *Calculus*, of a spongey Texture, weighing two Grains and a Quarter, into an Ounce of RED PORT WINE.

§. 583. *February* 1, it stood in a warm Digestion six Hours.

§. 584. *February* 3, it was four Hours in a warm Digestion.

§. 585.

§. 585. *February* 6, it had a warm Digestion three Hours.

§. 586. *February* 9, I examin'd, and found it *soft*.

In Digestion 14 Days, and 13 Hours of it warm.

### EXPERIMENT CXLIX.

§. 587. The same day (§. 582.) I put a *Calculus*, weighing one Grain, into a Mixture made with Half an Ounce of *red* PORT WINE, and an Ounce and half of *New River Water*.

§. 588. It stood the same Time of Digestion, and the same Hours of it warm, with the *Calculus* in the last Experiment.

§. 589. *February* 9, I examin'd it, and found it *dissolved*.

### EXPERIMENT CL.

§. 590. *February* 27, 1738-9, I put a *Calculus*, weighing two Grains and three Quarters, into two Ounces of *red* PORT WINE.

§. 591. *February* 28, it stood in a warm Digestion ten Hours.

§. 592.

§. 592. *March* 1, it had a warm Digestion nine Hours.

§. 593. *March* 2, it had a warm Digestion six Hours.

§. 594. *March* 3, it was five Hours in a warm Digestion.

§. 595. *March* 5, I examin'd, and found it *hard*.

In Digestion 6 Days, and 30 Hours of it warm.

## EXPERIMENT CLI.

§. 596. The same Day (§. 590.) I put a *Calculus*, weighing two Grains, into two Ounces of a Mixture of equal Parts of *red* PORT WINE, and *New River Water*.

§. 597. It had the same Digestion cold and warm with the *Calculus* in the last Experiment.

§. 598. *March* 5, I examin'd, and found it as *hard* as ever.

§. 599. *Obs.* 1. It appears from the Experiments CXLVIII, CXLIX, that *red* Port Wine, especially when mixed with Water, will



will contribute to the Dissolution of some Sorts of *Calculi*.

§. 600. *Obs.* 2. It appears likewise evident, that there are other Sorts on which it has no Effect.

## EXPERIMENT CLII.

§. 601. *February* 27, 1738-9, I put a *Calculus*, weighing two Grains, into an Ounce and half of WINE called TENT.

§. 602. *February* 28, it was in a warm Digestion ten Hours.

§. 603. *March* 1, it had a warm Digestion nine Hours.

§. 604. *March* 2, it stood six Hours in a warm Digestion.

§. 605. *March* 3, it was five Hours in a warm Digestion.

§. 606. *March* 5, I examin'd, and found it so *soft*, that it broke into several Pieces with feeling whether it was *hard*.

In Digestion 6 days, and 30 Hours of it warm.

### EXPERIMENT CLIII.

§. 607. The same Day (§. 601.) I put a *Calculus*, weighing one Grain, into a Mixture made with half an Ounce of TENT, and an Ounce of *New River Water*.

§. 608. It stood the same Time in Digestion, and the same Hours of it warm, with the *Calculus* in the last Experiment.

§. 609. *March 5*, I examin'd, and found it *hard*.

§. 610. *Obs.* From Experiment CLII, it appears, that TENT has somewhat of a Quality dissolvent of some Sorts of *Calculi*.

### EXPERIMENT CLIV.

§. 611. *February 27*, 1738-9, I put a *Calculus*, weighing six Grains, into two Ounces of MEDERA WINE.

§. 612. It stood six Days in Digestion, and thirty Hours of it warm, with the *Calculus* in Experiment CL.

§. 613. *March 5*, I examin'd, and found it *hard*.

## EXPERIMENT CLV.

§. 614. The same Day (§. 611.) I put a *Calculus*, weighing four Grains and a Quarter, into two Ounces of a Mixture made with equal Parts of MEDERA WINE and *New River Water*.

§. 615. It was in Digestion cold and warm, the same with the *Calculus* in the last Experiment.

§. 616. *March 5*, I examin'd, and found it so *softened*, that it broke into Pieces by gently wiping it with a Cloth.

§. 617. *Obs.* From Experiments CLV, it appears, that MEDERA WINE, when mixed with Water, has a Quality *dissolvent* of some Sorts of *Calculi*, and therefore is a Sort of Wine proper for the Use of Persons afflicted with the Stone.

## EXPERIMENT CLVI.

§. 618. *February 27*, 1738-9, I put a *Calculus*, weighing six Grains and three Quarters, into two Ounces of CANARY WINE.

§. 619.



§. 619. *February* 28, it had a warm Digestion ten Hours.

§. 620. *March* 1, it was nine Hours in a warm Digestion.

§. 621. *March* 2, it stood in a warm Digestion six Hours.

§. 622. *March* 3, it was five Hours in a warm Digestion.

§. 623. *March* 5, I examin'd, and found it so *softened*, that two small Pieces broke from the main Body of it, one of which crumbled into a Sort of hard Sand.

In Digestion 6 Days, and 30 Hours of it warm.

## EXPERIMENT CLVII.

§. 624. The same Day (§. 619.) I put a *Calculus*, weighing one Grain, into two Ounces of a Mixture of equal Parts of CANARY WINE and *New River Water*.

§. 625. It had the same Digestion cold, and warm, with that in the last Experiment.

§. 626. *March* 5, I examin'd, and found it so *soft*, that in feeling it crumbled into Pieces.

§. 627.

§. 626. *Obs.* It appears from these Experiments CLVI, CVII, that CANARY has a Quality dissolvent of the Stone ; and that Persons afflicted with it, may safely drink of it, when any Occasion makes it needful.

### EXPERIMENT CLVIII.

§. 627. *February* 27, 1738-9, I put a *Calculus*, weighing one Grain, into two Ounces of *White PORT WINE*.

§. 628. It stood in the same Digestion cold, and warm with the *Calculus* in the last Experiment.

§. 629. *March* 5, I examined and found it so *soft*, that it became a fine Sand with a gentle moving it between my Fore-finger and Thumb.

### EXPERIMENT CLIX.

§. 630. The same Day (§. 627.) I put a *Calculus*, weighing four Grains and a half, into two Ounces of a Mixture of equal Parts of *White PORT WINE*, and *New River Water*.

631. It had the same Time in Digestion  
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tion both cold, and warm with the *Calculus* in the last Experiment.

§. 632. *March 5*, I examin'd and found it thoroughly *dissolved*.

§. 633. *Obs.* From these Experiments (CLVIII, CLIX) it seems, that *White PORT WINE* has more of a Quality dissolvent of the Stone, than either red *Port Wine*, or *Tent*, or *Medera*, or *Canary*; and consequently is fitter for Persons troubled with the Stone, when any Occasion makes it advisable for them to drink Wine.

§. 634. I must observe, that the *Calculi* in Experiments CLIV, CLV, CLVI, CLVII, CLVIII, turn'd of a *blackish* Colour in their digesting.

## EXPERIMENT CLX.

§. 635. *February 27*, 1738-9, I put a *Calculus*, weighing four Grains, into two Ounces of RHENISH Wine.

636. It was in a cold, and likewise in a warm Digestion the same Time with the *Calculus* in Experiment CLVI.

§. 637. *March 5*, I examin'd and found it *hard*.



EXPERIMENT CLXI.

§. 638. The same Day (§. 635.) I put a *Calculus*, weighing two Grains and half, into two Ounces of a Mixture made with equal Parts of RHENISH WINE, and *New River Water*.

§. 639. It had the same Time in Digestion both cold and warm with the *Calculi* in Experiments CLVI, CLVII, &c.

§. 640. *March 5*, I examin'd, and found it so much *softned*, that it broke into Pieces with the feeling it ; but I must observe, that this *Calculus*, before it was put into the Mixture, appeared to be a Cluster of lesser Stones cohering together, which now came asunder, when I felt them, but the divided Parts felt hard.

§. 641. *Obs.* In these Experiments CLX, CLXI, it appeared to me, that RHENISH WINE contributes less to the Dissolution of the *Stone*, than any of the other foreign Wines, I had tried ; and consequently it is less fit to be drank by Persons afflicted with it.

## EXPERIMENT CLXII.

§. 642. *February* 27, 1738-9, I put a *Calculus*, weighing two Grains and a Quarter, into two Ounces of MOUNTAIN Wine.

§. 643. It stood six Days in Digestion, and thirty Hours of it warm.

§. 644. *March* 5, I examin'd and found it *hard*.

## EXPERIMENT CLXIII.

§. 645. The same Day (§. 642.) I put a *Calculus*, weighing one Grain and half, into two Ounces of a Mixture made with equal Parts of MOUNTAIN Wine and *New River Water*.

§. 646, it had the same Digestion cold, and warm with the *Calculus* in the last Experiment.

§. 647. *March* 5, I examin'd and found it *hard*.

§. 648. *Obs.* The Observation which arises from these Experiments (CLXII, CLXIII.) is, that there are some Sorts of *Calculi* on which *Mountain Wine*, neither  
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by it self, nor diluted with Water, has any Effect.

#### EXPERIMENT CLXIV.

§. 649. *December* 28, 1738, I put a *Calculus* of a brown Colour, rough, and hard, weighing one Grain and a Quarter, into two Ounces of WINE made of RAISINS of the *Sun*.

§. 650. *January* 4, it stood in a warm Digestion twelve Hours.

§. 651. *January* 5, it had a warm Digestion ten Hours.

§. 652. *January* 6, it was six Hours in a warm Digestion. In the Evening I examin'd and found it *soft*.

In Digestion 9 Days, and 28 Hours of it warm.

#### EXPERIMENT CLXV.

§. 653. *January* 19, 1738-9, I put two *Calculi*, one of 'em weighing two Grains and a Quarter, the other three Quarters of a Grain, into two Ounces of the same RAISIN WINE. A Stream of very small *Air-Bubbles* did immediately arise from the Stones.



§. 654. *January 31*, the twelfth Day of the Digestion, I found the smaller *Calculus* soft, but the other hard.

§. 655. *February 1*, they had a warm Digestion six Hours.

§. 656, *February 3*, they stood four Hours in a warm Digestion.

§. 657. *February 6*, they were in a warm Digestion three Hours.

§. 658. *February 9*, I examin'd, and found the *lesser* Stone dissolved, and the other hard.

In Digestion 22 Days, and 13 Hours of it warm.

## EXPERIMENT CLXVI.

§. 659. *January 24*, 1738-9, I put a *Calculus*, weighing one Grain, into a Mixture, made with half an Ounce of RAISIN WINE, and an Ounce and half of *New River Water*.

§. 660. *January 31*, I examin'd, and found it *softned*, and most of it dissolved, and returned the *calculous* Matter into the Mixture, and gave it the same warm Digestions

gestions with the *Calculus* in the last Experiment.

§. 661. *February* 9, I examin'd, and found it all *dissolved*.

In Digestion 16 Days, and 13 Hours of it warm.

§. 662. *Obs.* 1. It appears from these Experiments CLXIV, CLXV, CLXVI, that RAISIN WINE has a Quality dissolvent of the Stone.

§. 663. *Obs.* 2. That the dissolvent Quality seemed rather more active in the Mixture of one Part of the Wine with three of Water, than in the Wine it self.

§. 664. *Obs.* 3. That when it is needful for Persons afflicted with the Stone, to drink some spirituous Liquor, *Raisin Wine* is one proper Sort for them, and that if mixed with *Water*, it will make a suitable Drink.

## EXPERIMENT CLXVII.

§. 665. *February* 12, 1738-9, I put a *Calculus*, weighing two Grains and a Quarter, into two Ounces of ELDERBERRY WINE.

§. 666. *February* 19, It had a warm Digestion seven Hours.

§. 667. *February* 20, it was twelve Hours in a warm Digestion.

§. 668. *February* 21, it stood in a warm Digestion eight Hours. In the Evening I examin'd, and found it *hard*.

In Digestion 9 Days, and 27 Hours of it warm.

## EXPERIMENT CLXVIII.

§. 669. The same Day (§ 665.) I put a *Calculus*, weighing one Grain, into a Mixture made with half an Ounce of ELDER-BERRY WINE, and an Ounce and half of *New River Water*.

§. 670. *February* 13, it stood in a warm Digestion ten Hours.

§. 671. *February* 14, it had a warm Digestion ten Hours.

§. 672. *February* 15, it was eight Hours in a warm Digestion. In the Evening I examined and found it *dissolved*.

In Digestion 2 Days and half, and 28 Hours of it warm.

§ 673. *Obs.* From Experiment CLXVIII.

it



it appears, that *Elderberry Wine* diluted with Water, will dissolve some Sorts of *Calculi*; and therefore, as Wine taken into the Stomach is diluted with the Contents of it, and likewise with the Fluids secreted into the Bowels, *Elderberry Wine*, by it self, when a spirituous Liquor is needful; and at other times, diluted with *Water*, may profitably be drank by Persons afflicted with the Stone.

## EXPERIMENT CLXIX.

§. 674. *December 29, 1738, I put a Calculus, weighing thirty seven Grains, into two Ounces and half of Monmouthshire CYDER, of about fifteen Months old. AIR-BUBBLES immediately rose from it.*

§. 675. *January 4, It stood in a warm Digestion ten Hours.*

§ 676. *January 5, It was in a warm Digestion ten Hours.*

§. 677. *January 6, It had a warm Digestion six Hours. In the Evening I examin'd, and found a great deal of it dissolv'd, and the Remainder softned, and returned it into the Cyder.*

§. 678.

§ 678. *January* 23, I examin'd and found it *dissolved*; except one Part weighing four Grains, another weighing near two Grains, and three smaller Parts weighing together two Grains.

In Digestion 25 Days, and 28 Hours of it warm.

## EXPERIMENT CLXX.

§ 679 The same Day (§. 674,) I put four small *Calculi*, weighing together one Grain, into half an Ounce of the same Cyder. They were 23 Days in Digestion, and 28 Hours of it warm,

§. 680. *January* 23, I examin'd, and found one of them *dissolv'd*, and the rest *hard*.

§. 681. These *Calculi* in Experiment CLXX, were of the reddish Sort, and exceeding hard, and the Reason of their not being put into a larger Quantity of *Cyder*, was, that my Digester was so full as not to admit Phials that would hold more.

## EXPERIMENT CLXXI.

§. 682. *December* 29, 1738, I put two small *Calculi* of different Sorts, weighing together one Grain, into two Ounces of a Mixture of the same *Cyder*, (§. 674.) and *Water*.

§. 683. *January* 4, they stood in a warm Digestion twelve Hours.

§. 684. *January* 5, they were in a warm Digestion ten Hours.

§. 685. *January* 6. they had six Hours of a warm Digestion. In the Evening I examin'd, and found them both *hard*, and returned them into the Mixture.

§. 686. *January* 22, I examin'd them again, and found one of them *soft*, and the other *hard*.

In Digestion 24 Days, 28 Hours of it warm.

## EXPERIMENT CLXXII.

§. 687. *March* 19, 1738-9, I put a *Calculus*, weighing one Grain and three Quarters, into two Ounces of the same Sort of *CYDER* (§. 674.)

§. 688.



§. 688. *March* 21, it was in a warm Digestion eight Hours.

§. 689. *March* 2, it was five Hours in a warm Digestion.

§. 690. *March* 23, it had a warm Digestion six Hours.

§. 691. *March* 24, it stood in a warm Digestion eight Hours.

§. 692. *March* 26, it was eleven Hours in a warm Digestion.

§. 693. *March* 27, I examin'd, and found it *hard* as ever.

In Digestion 8 Days, and 38 Hours of it warm,

## EXPERIMENT CLXXIII.

§. 694. The same Day (§. 687.) I put a *Calculus*, weighing one Grain, into a Mixture made with half an Ounce of the same CYDER, (§ 674.) and an Ounce and a half of *New River Water*.

§. 695. It had the same Digestion both cold and warm with the *Calculus* in the last Experiment ; and at the same Time I examin'd, and found it very *soft*, and thoroughly dissolved.

§. 696.

§. 696. *Obs.* 1. It appears from Experiment CLXIX, CLXX, CLXXI, CLXXIII, that this *Monmouthshire* CYDER is happily furnished with a Quality dissolvent of several Sorts of *Calculi* ; for they were different *Calculi* I tried with it.

§. 697. *Obs.* 2. That nevertheless there are some Sorts of *Calculi*, which seem too hard to be dissolved by it. This I infer from the Event of the Experiment CLXX, CLXXI, CLXXII.

#### EXPERIMENT CLXXIV.

§. 698. *March* 19, 1738-9. I put a *Calculus*, weighing two Grains and a Quarter, into two Ounces of a *Southam* CYDER, strong bodied, and of a rough Taste, made in *October* 1737.

§. 699. It had the same Digestion, both cold and warm, with the *Calculus* in Experiment CLXXII. I examin'd it at the same Time, and found it as *hard* as ever.

#### EXPERIMENT CLXXV.

§, 700. The same Day (§. 698.) I put a *Calculus*, weighing one Grain and a Quarter,

ter, into a Mixture made with half an Ounce of the same CYDER (§. 698.) and an Ounce and half of the *New River Water*.

§. 701. It had the same Digestion, both cold and warm, with the *Calculus* in Experiment CLXXII. I examin'd it at the same Time, and found the Cohesion of its external Parts weakned : Some Parts broke off with the handling it ; but they felt *hard*.

## EXPERIMENT CLXXVI.

§. 702. The same Day (§. 698.) I put a *Calculus*, weighing six Grains and a Quarter, into an Ounce and six Drachms of a *Southam* CYDER, of a stronger Body, and a rougher Taste than the former, and made at the same Time. (§. 698.)

§. 703. It had the same Digestion, both cold and warm, with the *Calculus* in Experiment CLXXII. I examin'd it at the same Time, and found it very much *softened* : It broke into Pieces with feeling it.



## EXPERIMENT CLXXVII.

§. 704. The same Day (§. 698.) I put a *Calculus*, weighing two Grains and a Quarter, into a Mixture made with half an Ounce of the same *Cyder* (§. 702.) and an Ounce and half of the *New River Water*.

§. 705. It had the same Digestion, both cold and warm, with the *Calculus* in Experiment CLXXII. I examin'd it at the same Time, and found it *hard*.

## EXPERIMENT CLXXVIII.

§. 706. The same Day (§. 698.) I put a *Calculus*, weighing five Grains, into an Ounce and half of *Herefordshire CYDER*, made of an Apple called a *Pauson*, in *October* 1737.

§. 707. It had the same Digestion, both cold and warm, with the *Calculus* in Experiment CLXXII. I examin'd it at the same Time, and found the Cohesion of its Parts *dissolved*: It broke into a Mash with feeling it.

## EXPERIMENT CLXXIX.

§. 708. The same Day (§. 698.) I put a *Calculus*, weighing one Grain and a Quarter, into a Mixture made with half an Ounce of the same CYDER, (§. 706.) and an Ounce and half of the *New River Water*.

§. 709. It had the same Digestion, both cold and warm, with the *Calculus* in Experiment CLXXII. I examined it at the same Time. and found it *hard*,

## EXPERIMENT CLXXX.

§. 710. The same Day (§. 689.) I put a *Calculus*, weighing four Grains, into an Ounce and half of *Gloucestershire* CYDER, made of an Apple called the *White Apple*, in the *Forest of Dean*, October, 1737.

§. 711. It had the same Digestion, both cold and warm, with the *Calculus* in Experiment CLXXII. I examin'd it at the same Time, and found it *hard*; but a little sandy Matter came off from its Surface.

Ex-

EXPERIMENT CLXXXI.

§. 712. The same Day (§. 698.) I put a *Calculus*, weighing one Grain, into a Mixture made with half an Ounce of the same CYDER, and an Ounce and half of the *New River Water*.

§. 713. It had the same Digestion, both cold and warm, with the *Calculus* in Experiment CLXXII. I examin'd it at the same Time, and found it *hard*.

§. 714. *Obs.* 1. It appears from Experiments CLXXV, CLXXVI, that the *Southam* CYDER has a Quality dissolvent of some *Calculi*.

§. 715. *Obs.* 2. From the Experiments CLXXIV, CLXXVII, it seems reasonable to infer, that there are other *Calculi*, which this *Cyder* is not able to dissolve.

§. 716. *Obs.* 3. It is evident from Experiment CLXXVIII, that *Herefordshire* CYDER is well furnished with a Quality dissolvent of some *Calculi*.

§. 717. *Obs.* 4. That there may be other Sorts of *Calculi* not dissoluble by this sort of



*Cyder*, (§. 716.) This seems a reasonable Inference from Experiment CLXXIX.

§. 718. *Obs.* 5. That the *Gloucestershire Cyder* discovered less of a dissolvent Quality than the other.

§. 719. *Obs.* 6. That CYDER, by it self, or mixed with *River Water*, may fitly be drank by Persons afflicted with the Stone, provided they are free from *Nephritick* Pains, and upon Trial find no Pain produced by the drinking it. I add this Caution, because in some Bodies it acts as a *Stimulus*, and thereby may sometimes occasion both *Nephritick* and *Gouty* Pains ; tho' it contributes nothing to the Increase of the Stone, or the Production of the gouty Humours. Those Persons, therefore, that find any Inconvenience to follow upon the Use of *Cyder*, should totally abstain from it.

## C H A P. XV.

*Containing some Inferences from the Experiments made on Calculi with Wine ; with Observations concerning the Nature, Virtue, and Uses of Wine, Cyder, and Brandy.*

§. 720. **T**HE EXPERIMENTS made with *Wine*, and *Cyder*, by themselves, and mixed with *Water*, have obliged me, in some Particulars, to change my Sentiments. Divers Things, which before these Researches, lay in Darkness, and were to me unknown, have, in multiplied Experiments been discover'd, and brought a pleasing Light with them.

§. 721. When in the latter End of *May*, or beginning of *June* last, I applied myself to renew my Enquiries after DISSOLVENTS of the *Stone*, I apprehended that the *Stone* and *Gout* were chiefly occasioned by drinking *Wine*, high Feeding, and the Neglect of Exercise.

§. 722. I imagined, for Reasons specified in the Beginning of these Papers, that WINE, contributed much to the Production of both these Distempers, (§. 721.) But Experiments, and further Consideration, have convinced me that I was mistaken.

§. 723. I found by many Trials, that WINES and CYDERS have a Quality dissolvent of the *Stone*. This Discovery made me think it very wrong to impute the Production of the Stone to the drinking of Wine, and lead me into a more close Contemplation on these Liquors, so much in Use : And the more I thought, the more Reason I saw to give up my former Opinion.

§. 724. I considered, that neither *Wines*, nor *Cyders*, nor any other *spirituous Liquors* (which are all produced by Art from vegetable Substances) have *animal alkaline Salts*, or *animal Oil*, which are two essential Parts of the *Calculus*, and of *gouty Humours*, and Concretes.

§. 725. And that the several Parts of these Liquors pass through, and out of human Bodies, much quicker than the Parts of animal Substances, eaten as Aliment.



§. 726. I likewise considered, that the FLESH of all Sorts of Animals, used as Food, contain all the constituent Parts, both of the STONE, and GOUTY HUMOURS, viz. *alkaline animal Salts, animal Oil, Air, and Earth*; and therefore is more adapted to fill our Bodies with the constituent Matter of both *Stone* and *Gout*, than any other Kind of Aliment whatsoever. And these Considerations made it appear to me very reasonable to discharge *Wine, Cyder*, and other *spirituous Liquors*, from the Imputation of being the Cause either of the *Stone* or *Gout*; and to think that altho' continued Excess in the Use of them, will certainly bring on mortal Diseases, yet not those under our present Consideration.

§. 727. And since it is manifest, that ANIMAL FOOD has all the *four* constituent Parts of the *Stone*, and *Gout*; (§. 726.) and since we cannot find two of those four in any other Sort of Aliment, it appears but just to condemn *animal Food*, at least, as the principal Cause of these tormenting and dreadful Distempers.

§. 728. Hence (§. 727.) 'tis evident, that Persons much afflicted with the *Stone* or *Gout*,

should totally abstain from *animal* Food.

§. 729. I do not however imagine, such an intire Abstinence to be always necessary : When they are thoroughly recovered from those Diseases, they may return to animal Food in a sparing Manner ; provided they will use due bodily Exercise, and such a Quantity of *acid* or *acescent* vegetable Aliment as will prevent the Increase of the *animal alkaline Salts* beyond the Standard of Health.

§. 730. For this Purpose, I think that *Vinegar*, or *Verjuice*, or the *Juice* either of *Lemons*, or of *Seville Oranges*, should be used in their Sauce ; and always Fruit of one Kind or other, should be eaten after their Dinner, when *animal* Food has been any Part of it.

§. 731. I hope it will not be disagreeable, if I make some Observations on the Use of *Wine*, *Cyder*, and other *spirituous Liquors*.

§. 732. I. I shall consider *WINE* ; and here must observe, that all *Wines* are either *acid*, or *acescent* Liquors ; and consequently, in their Nature, and Properties, are opposite, or contrary to every morbid Quality in the Blood of an *alkaline Kind* ; and so far from

from contributing to the Production either of the *Stone* or *Gout*, that there is Reason to apprehend a proper Use of them may retard the Accession of those Distempers.

§. 733. As to the Virtues of Wine, tho' they agree in some general Qualities, yet there is a Difference in each Sort of Wine, according to the Difference that is in the *Grapes* from which they are made : Those of the *red* Colour, are commonly more restraining than those that are *white*.

§. 734. But all of them, that are in most frequent Use, have those Properties by which they incide, and attenuate *viscid* Humours upon a Mixture with them ; and moderately drank, they deterge the Membranes of the Mouth, *Oesophagus*, Stomach, and Bowels ; they contract somewhat the muscular Fibres, render the Vibrations of the Arteries, and the Action of the Heart, stronger, the Circulation of the animal Fluids quicker, and the Spirits, or nervous Fluid more brisk, and the Mind more chearful. These Effects are well known to follow a prudent Use of proper Wines.

§. 735. WINES are useful Ingredients in *Gargarisms*, and prove suitable *Cordials* in



many Diseases. I have often, with good Success, advised *Wine* as a CORDIAL, for Persons under Sicknefs, that never used to drink it in Time of Health ; but it is more needful for those, who have been accustomed to drink plentifully of it every Day.

§. 736. It is very proper many Times in the Declination of a Distemper, and after the Body has been reduced to great Weakness by long Illness, or debilitating Evacu-  
ations, whether by *Bleeding*, or *Purging*.

§. 737. The Custom of drinking Wine to Excess, is a pernicious Practice : It is an Extreme, which ought always to be avoided ; But it is also an Extreme totally to forbid the Use of it, and to allow it no Place among our Aliments ; it is rejecting a Means of Health, which, used with Discretion, has been, and may be on many Occasions, of signal Service to our Bodies.

§. 738. It appears to me very needful for Persons that lead *sedentary* Lives, and for those that go into the Use of a *vegetable Diet*.

§. 739. As for Persons, whose Lives are *sedentary*, and who can't have due Assistance for the Preservation of their Health,  
from

from bodily Exercise , (which would augment the vital Heat, quicken the Circulation of the Blood, and promote all the Secretions, and Excretions ; and remove the Occasions of many Distempers) the moderate Use of Wine, if their Circumstances will allow the Expence of it, seems to me very needful, on the Account of the natural Effects of it, (*vid.* §. 734.) when taken into the Stomach.

§. 740. I say not these Things, in Recommendation of *Wine*, from any Fondness of drinking it my self; for I avoided the Use of it many Years, on the Account, that I had been afflicted with terrible Fits of the Stone, and always thought, that drinking *Wine* would increase it ; till lately, I have been convinced of the contrary by my Experiments.

§. 741. And though I have changed my Opinion, I drink but very little ; it may be two, or three Glasses sometimes at Dinner, and hardly a Pint in a Week, one Week with another : Because I have commonly Exercise enough, and therefore seldom have Occasion to drink Wine to make up the Want of bodily Labour.

§. 742. When I have not been in a firm State of Health, much Riding, or Walking would bring me into *faint, clammy, and cold Sweats*; at which Times, half a Pint of *Mountain Wine*, which makes four full Glasses, and which I drank in a little Time one after another, was my Remedy, and always effectual; it took off my Sweats, abated my Fatigue, and gave a sensible Refreshment to my Spirits: And when I have advised *Wine* for others, it has done them Good like a Medicine.

§. 743. SEDENTARY PERSONS certainly may, not only with Safety, but to their great Benefit, drink Wine moderately; if they can get that which is neat and genuine; as appears from §. 734.

§. 744. I apprehend, that a moderate Use of Wine is likewise needful for Persons, who totally leave off *animal Food*, and live altogether on a *vegetable Diet*; at least in the Beginning of this new Way of Living.

§. 745. This (§. 744.) appears to me from considering, that the Chyle made of *animal Food*, is more strengthening to the Blood, and Solids of human Bodies, than



than that which is made of *vegetable* Aliments ; which is evident from the Experience and Testimony of Persons, that have made the Trial. And the Reason of the Difference is pretty obvious, *viz.* That animal Food is more easily and quickly assimilated, and transmuted into the Nature of the Blood, and more firmly supplies the Waste of the Solids.

§. 746. And on this Account it is, that Persons, who lead sedentary Lives, and whose Expence of Blood and Spirits is less, than that of others, who use much Exercise, should eat less animal Food than they.

§. 747. And on this Account likewise it is, that eating too much *animal* Food, occasions Repletion, and not only the *Gout*, and *Stone*, but various other Diseases. For if Persons, who are come to Maturity of Stature, and Bulk, take more Aliment than is needful to repair the daily Expences of the Body, they must of Necessity become *plethorick* in one Respect or other.

§. 748. But to return to the Point under Consideration (§. 744.) I must observe, that upon the Change of Diet, (that is, upon Persons leaving off *animal* Food, and con-  
fining

fining themselves to the *vegetable*,) the natural Effects will be, an Abatement of bodily Strength, a Diminution of the Vigour of their Spirits : that is, supposing, that while they lived on animal Food, they eat no more than was requisite for the Occasions of their Bodies.

§. 749. The Reason of such Effects (§. 748.) is, that there is more Nutriment from *animal* than *vegetable* Food, as appears from what hath been observed, §. 745. Wine therefore may be useful to Persons in a vegetable Diet, as it strengthens the Solids, and conduces to maintain the Action of the Heart and Arteries in due Force.

§. 750. If it be said, that Persons living on vegetable Aliment, are at least as strong, lively and vigorous, as any that live on animal Food, and therefore cannot want Wine on the Account I have mentioned.

§. 751. I grant it to be so with several particular Persons, and that such Persons do not need Wine, and will do well, if they drink none : But it is not so with all in the vegetable Way ; At least not in the first Weeks or Months, after they are in it ;  
and

and it is to these that I think a moderate Use of Wine may be fitly allowed.

§. 752. But there is another Occasion for Wine with a vegetable Diet ; which arises from the relaxing Quality of great Part of the vegetable Aliments, particularly resident in most ripe Fruits, and in *Asparagus, Lettice, Cabbage, &c.* and Persons that feed too much on these Sorts of Vegetables, are liable to have a flabby Flesh, weak Fibres, and to fall into *Loosenesses* ; which Effects may very much be prevented by a moderate Use of proper Wines.

753. I grant that the same Intentions, for which Wine is proper, may be obtain'd by Medicines ; but it is not my Way to propose Medicines for Ends, which may as well be obtained without them.

§. 754. Indeed, if *drinking Wine*, without returning to the Use of animal Food, would produce the *Gout*, as returning to the Use of animal Food, has produced it again, without returning to the Use of Wine. I should think it necessary to forbid the Use of it to Persons troubled with the *Gout* ; and to advise other Things  
for



for those Ends for which Wine is wanted ; but till Instances of proper Facts shall prove the *Gout* to be producible by a moderate drinking of Wine, without the Use of any animal Food, it seems to me reasonable to allow Persons the Liberty of drinking it, when they have Occasion for it.

§. 755, II. It may not be altogether useless, if I observe some Things likewise concerning the Nature, the Qualities, and Uses of CYDER, which is another Sort of Spirituous Liquor, much used in many Countries, and is the *Juice* of APPLES, brought into a spirituous State by Fermentation ; as WINE is the Juice of *Grapes*, brought into the like State by the same Means.

§. 756. There is as great a Variety of *Cyders*, as there is of the Apples from which they are made ; and every Sort of Cyder has some Qualities by which it is distinguished from the others. But all Kinds of Cyder have some *common Properties*, by which they differ from spirituous Liquors made from other Species of Vegetables.

§. 757. The Knowledge of these is deducible by understanding the Nature of Apples ;

ples ; which are an *acid* Fruit, and, I think, one of the best *Pectorals* in the vegetable Kingdom ; which may be rationally concluded from those Effects of them, which are known to follow a plentiful Use of them.

§. 758. Dr. BAYNARD gives us an Account of very great Benefit found by Experience from this Sort of Fruit \* with *Milk*, in Cases of the *Small Pox* ; and mentions them as the greatest Pectorals, known to be such by the Testimony of Experience ; and acquaints us, that Sir *John Floyer* found the greatest Benefit in his most severe *Asthma*, by the constant Use of *Apple-Water*, which was his *Potus ordinarius*, as well at Meals as otherwise. †

§. 759. Dr. BAYNARD likewise relates, that Dr. *Savory* of *Marlborough* told him of a Horse diseased and broken-winded (as they call it) which was turned into an Orchard, and by eating the Apples that fell from the Trees, and all those he could reach, in some little Time was observed to mend, and grew better and better, so that he became again serviceable, and fit for Use. ‡

§. 760.

\* *Vid. Hist. of Cold Bathing, p. 231, 232.*

† *Vid. Hist. of Cold Bathing, p. 314.*

‡ *ibid. p. 315, 316.*

§. 760. This Fact (§. 759.) induced me to try what Apples would do for the Relief of a favourite Horse of mine, that was so much broken-winded, and had frequently such terrible Fits of Coughing, that obliged me to let him stand still several Minutes at a Time on the Road to recover himself, before I could venture to go on ; and sometimes I have changed Horses with my Servant, fearing, he might drop under me.

§. 761. It happen'd to be a plentiful Year for Apples, and I bought those that fell from the Trees ; and had a Quarter of a Peck of these Apples given to the Horse every Morning, and Evening, for six or seven Weeks.

§. 762. The Advantage, which the Horse received, was surprizing to me. I cannot say he became perfectly free from his Cough, but he cough'd very seldom, became hearty, and strong, and his Breath easy ; and I could ride him with Pleasure thirty or forty Miles a Day. And he retain'd this Amendment. Some Years after, I sold him to a Friend, to whom he has proved a useful Servant, and for ought I know is so still,



still, tho' he must now be upwards of two and twenty Years old. I don't know, but if I had continued his Apple Diet, he might have become perfectly free from his Cough.

§. 763. I hope the mentioning the Case of my Horse will be excused : Dr. *Baynard's* Account of the *Wiltshire* Horse was the Means of recovering mine to his Usefulness; and the rehearsing these Cases may happen to be of Service to others on the like Occasions. But there is another Use may be made of these Facts, *viz.* as Instances of the Virtue and Efficacy of APPLES for curing *old Coughs, Difficulties of Breathing*, and other Disorders of the Lungs depending on the same Causes.

§. 764. “ That APPLES are a wonderful Pectoral, says Dr. *Baynard*, *Expertus loquor*, for *Apples* and *Milk*, &c. saved my Life in a most deplorable and confirm'd *Phthisis* ; and I remember that that learned Gentleman Sir *John Hodgkins*, sometimes President of the ROYAL SOCIETY, and *Master* in *Chancery* — told me, that he knew a Consumptive Gentlewoman, worn to a Skeleton, cured by the sole Use of *Apples*, and *Apple-Water* (a).

(a) *Vid. Hist. of Cold Bathing*, p. 316.

§. 765. Now, if we consider the State of the animal Fluids under those Distempers, in which *Apples* have proved so exceedingly beneficial, *viz.* very *viscid*, and the Viscidity often attended with an *alkaline* Acrimony, we may infer, that Apples have a *dissolvent* Quality; because without it they could not destroy the viscid Quality of the animal Fluids: And I may add, that if they were not *acid*, they could not so easily alter the Figure, or the Properties of the animal *alkaline Salts*, too abundant in the Blood of Persons afflicted with the Diseases mentioned.

§. 766. But their dissolvent Quality appears evident by the EXPERIMENTS made with the *Juices*, and *Decoctions* of them; which shew that they may be useful both for dissolving the Stone; and curing those Diseases, which arise from, or depend on a *viscid* Blood, or which result from an Abundance of *alkaline Salts* in it.

§. 767. There is indeed a great Difference among Apples, as to the Quality we are considering: for Apples that have a rough, austere Taste, are more *restringent*, and less dissolvent



dissolvent than others ; as those Apples, which are not rough, but have, if I may so express it, either a thin acid Juice, as *Codlins* ; or have a mild, and grateful Taste, are less restraining, and more *dissolvent*.

§. 768. And even in the same Sort of Apples, there is a Difference in the Quality of them before they are ripe, and that which they have, when they are come to full Maturity : Which Difference is very similar to that which is found in some different Species of Apples, of equal Ripeness.

§. 769. DIASCORIDES took Notice of this Difference, observing, that unripe, harsh Fruit was styptick, or adstringent, and that it was otherwise in Fruit fully ripe (a).

§. 770. The Consideration of what has been remark'd concerning the Quality of Apples (§. 765, &c.) may lead us to understand the Nature of CYDERS ; and that they have that Sort of *acid* Particles, which are adapted to destroy the Cohesion of viscid Particles, and to alter the Figure, and Qua-

(a) ὁ καρπὸς ἔνωμος μὲν συληκὸς κατέσκηε· πεπανθεὶς δὲ οὐχ ὁμοίως. *Diascorid. lib. 1. cap. 160.*



lity of the *alkaline* animal Salts in the Blood.

§. 771. And it must be here observed, that the different Qualities of the different Sorts of Apples (§. 767.) do pass into the Cyders, that are made from them; so that rough, and austere Cyders are more *adstringent*, and less *dissolvent* than Cyders, which are not rough, or austere, but mild, and of a pleasant Taste; which indeed are not adstringent, but abundantly more dissolvent, than the other.

§. 772. From what has been noted, (§. 770, 771.) we may infer, that *Cyders* may fitly be drank by Persons afflicted with the Stone, to promote the Dissolution of it; and may contribute to prevent the Formation of the gouty Humour.

§. 773. The CYDERS, I speak of, are those which are made only of the *Juice* of Apples, well bodied, in the second Year of Age, that will not fly out of the Bottle, nor sparkle over the Brim of the Glass; but have their Spirits as sedate, as those in *Mountain Wine*, or *Medera*.

§. 774. And as to the Choice of CYDERS, I think that Persons whose Flesh is flabby, and  
Vessels

Vessels lax, should choose to drink those, which are *rough*, or *austere* ; and that others, who are of sanguine, or cholerick Constitutions, firm Flesh, rigid Fibres, and subject to be costive, should prefer the drinking of those, which are *acid without Roughness*, or *sweet and soft*. And these Directions should be observed in the Choice of Wines.

§. 775. I must likewise observe, what is well known to those that have experienced the Use both of *Cyder*, and *Wine*, that the former of these does not so much heat the Blood, or affect the Head with Pain, when plentifully drank, as the latter ; consequently must be more safe, and proper for Persons that are *asthmatick*, or afflicted with any Disorders of the Head.

§. 776. I may add, that APPLES, and CYDER may be useful not only to Persons afflicted with the *Stone*, but to those who are subject either to the *Jaundice*, or *Melancholy*.

§. 777. That APPLES, and CYDER may be of Service to Persons under the JAUNDICE, I think will appear evident, if we consider



the State of Things in the Body under this Distemper, *viz.*

1. That the BILE is not then secreted from the Blood by the Liver, at least not in due Quantity.

2. That the *Fæces alvinæ* are of a whitish Colour, from a Deficiency in the Quantity of *Bile* excreted into the *Duodenum*.

3. That Particles of *Bile* (not being secreted by their proper Gland, the Liver) become accumulated, or too abundant in the Blood.

4. That this Increase of the Quantity of bilious Particles in the Blood, occasions, 1. A Secretion of them from it by the subcutaneous Glands, and lymphatick Arteries, which terminate under the *Epidermis*; and consequently produces a yellow Colouring of the Skin. 2. A Secretion of them by those *Tubuli* in the Kidneys, which convey the Urine from the Blood to the *Pelvis* of each Kidney, for its Evacuation; and consequently, by the Mixture of the Particles of *Bile* with the Urine, causes a yellow Colouring of it, as if tinctured with Saffron.

§. 778. As to the State of the Blood under these Symptoms, (§. 777.) it seems, that



that the Parts of it are too compact ; and that the Globules of the BILE are united with Particles of the animal *Salts*, or *Oil*, or *Earth*, or rather among themselves, so as to form dense Globules, larger than in Time of Health.

§. 779. The Globules of *Bile* in a Person that has the *Faundice*, being not at all, or at least not sufficiently secreted by the secreting TUBULI of the Liver (§. 777, N<sup>o</sup> 1.) but secreted by the secreting *Tubuli* of the Kidneys ; and by the subcutaneous Glandules and Vessels, (§. *ibid.* N<sup>o</sup> 4.) proves, in my Apprehension, that the Diameter of the Cavity of the secreting *Tubuli* of the Liver, is less than that of the Cavity of these other Vessels, thro' which the Particles of the Bile, &c. pass, during the Continuance of this Distemper ; and also that the Globules of *Bile* are united to other Particles, (§. 778.) and thereby become more bulky than in the Time of Health, and too large to enter, and pass thro' the secretory *Tubuli* of the Liver.

§. 780. And that the Globules of *Bile*, in the *Faundice*, are so united, (§. 778.) may likewise be concluded from the Nature of those

Medicines by which this Distemper is most happily cured.

§. 781. This (§. 778, 779.) being the State of the Case in Persons under *icterick* Symptoms, it appears very rational to hope, that those Things, which are proper to alter, and correct that State of the Blood, (§. 778.) may be useful to disunite the Particles of Bile diffused in the Blood, from any other Particles adhering to them, and to subdivide the Globules of *Bile* into lesser, and so render them passable their proper Way; that is, thro' the secreting *Tubuli* of the Liver; and thus recover the animal Secretions, and Excretions to their healthful State.

§. 782. Therefore, since *Apples*, and *Cyder* have an *attenuating*, and *dissolvent* Quality, adapted to correct such a State of the Blood, we have Reason to think, that the Use of them may contribute to the Relief of Persons afflicted with the *Jaundice*.

§. 783. 2. That these Aliments (§. 782.) may also prove beneficial to Persons afflicted with MELANCHOLY, or any *hysterical*,

OR



or *hypochondriacal* Disorders tending to it, will be evident, if we consider the State of Things in Bodies, that are under these Diseases ; which I apprehend to be this, *viz.*

§. 784. That the Globules of the BLOOD are much more dense, than in the Time of Health ; whence the Colour of it is darker, and likewise that the Globules of the BILE are more compact ; and the Colour of it Black ; on which Account the *Bile* of Persons under this Distemper is called *atra Bilis*, or black Bile, and the Disease *Melancholia*, a *Greek Word*, of the same Signification, used by the Ancients, because the Bile, which Persons under this Distemper threw up, when they vomited, appear'd in a Manner as black as Pitch.

§. 785. This State of the *Blood*, and *Bile*, (§. 784.) may be known, not only by the Discourse, the Complaints, and Behaviour of the Person, whose Case it is, but by observing that his Countenance is paler, or yellower, or more tawny or livid than in Time of Health ; his Breathing, and his Pulse  
slower,



flower, and the Heat of his Body less; his extreme Parts being colder than usual.

§. 786. From what has been observed, (§. 784, 785.) it follows, that those Aliments which have a *dissolvent* Quality, (a Quality conducive to divide the too dense, and compact Globules of the *Blood*, and *Bile* into lesser, and thereby render the Circulation of them more free and easy) are like to afford great Relief to *melancholick* Persons.

§. 787. We may therefore conclude from the Nature of *Apples*, and *Cyder*, that the Use of them may be very beneficial in such Cases.

§. 788. I have been confirmed in these Sentiments, by observing the Benefit they afforded to some Persons, for whom I advised them, §. 776.

§. 789. Here let me observe, that as when a red Globule of *Blood* is divided into five or six lesser, the divided Parts, or those lesser Globules appear of a lighter, or nearly of an Orange Colour; so it happens on the dividing a Globule of *Bile*, that the divided Parts become of a lighter Colour: Which gives us Reason to apprehend, that the blacker the Blood, or Bile appears to be, the

the more their Globules have of the lesser united in their Contexture ; so that one black Globule of Blood or Bile, has too great a Number of the lesser Globules compacted together.

§. 790. The Consideration of these Things, (§. 784, *ad* 788.) may happily lead us to understand what Sort of *Medicines*, as well as what Sorts of *Aliments* are proper for the Cure of Melancholy.

§. 791. If it be thought that Apples, because of their *refrigerating* Quality, must be improper for Persons under Melancholy, on the Account that their Bodies are colder than in Time of Health ; it may be consider'd, that so far as Apples effect the Attenuation of the *Blood*, so far they promote its quicker Circulation ; and consequently, an Increase of the Friction of its Globules, and the Recovery of the vital Heat to its healthy Standard ; by removing the Impediment, or the Causes, which had diminish'd it.

§. 792. III. I propos'd to myself the observing some Things concerning BRANDY, on the Account, that there sometimes hap-  
pen



pen Cases in which the Use of it, with other Aliments, is very needful, and often proves exceeding beneficial.

§. 793. The Custom of drinking this, or any other such spirituous Liquors by Drams; the having Recourse to them daily to keep up the Spirits; the taking a Glass of them after Meals to promote Digestion; and such-like Practices, are *immoral* and *destructive*; for, if continued, they will disable the secreting Organs from performing their respective Offices, and destroy the Appetite: They will hinder the Excretion of Urine, make it in Time to become little in Quantity, and high-colour'd; and will produce the *Faundice*, or *Dropsy*, or some other Disease, that will hasten an untimely Death: And what is worse, they will bring on such Persons the horrid Guilt of destroying themselves: A miserable Preparation this! for the Appearance of their Souls before that holy God, who gave them their Lives, and will demand of them an Account of what Care they took of them, as well as how they employ'd, and improved them.

§. 794. But notwithstanding the direful Effects of drinking *Brandy*, when it ought  
not



not to be drank ; or in an improper Manner, or in undue Quantities, yet there sometimes occurs Cases in which it may be very serviceable ; and in such Cases, the Use of it, in Reason ought to be allowed.

§. 795. The Abuses of every Kind of Aliment should be laid aside ; but we should not reject that Use of Things, which in all Probability will prove beneficial.

§. 796. Persons, in my Apprehension, run into a groundless Extreme, when, in giving an Account of any Sort of *Aliment*, or *Medicine*, they either represent it as good for every Thing, or as good for nothing : For my Part, I can't recollect any of them, that with Truth can be so represented.

§. 797. Some object against the Use of *spirituous LIQUORS*, and of *aromatick*, warm, and *heating ALIMENTS*, because they *quicken the Pulse, increase the Heat of the Blood, and the Tenseness of the animal Vessels*. These Reasons indeed prove, that such Liquors, and Aliments should not be used, when the Pulse should not be quickened, and rendered stronger ; when the vital Heat ought not to be augmented ; and when the animal  
Vessels

Vessels should not be made more tense ; but these Reasons likewise prove, that such spirituous Liquors, and such Aliments may be proper, when there is Occasion to raise the Pulse, to quicken the Circulation of the Blood ; to augment the vital Heat, when too languid ; and to recover the animal Vessels to their healthy Tenseness, when they are too lax.

§. 798. Having premised these Remarks, (§. 791, *ad* 797.) I shall consider the Nature of *Brandy*, and the Use of it with other Aliments.

§. 799. By BRANDY I mean that spirituous Liquor, which by Distillation is raised, or produced from *Wine* made of the Juice of Grapes.

§. 800. All spirituous Liquors are vegetable Substances, produced from Vegetables of one Kind, or other, with, or without Water ; by Fermentation, or Distillation, or both ; and the *Particles*, of which they consist, did pre-exist in the Vegetables from which they are derived : But it is of no great Importance to know their Figure, or Modification in their pre-existent or present State ; it may suffice us, if we can tell how  
they



they may subserve the Preservation, or Recovery of our Health ; and what Effects may be expected from them.

§. 801. And as to *Brandy*, when taken into the Stomach, it very much increases the Tenseness of the Vessels, makes their Vibrations stronger, abates the Laxity of the secreting *Tubuli*, lessens their Diameter, and augments the Heat of the Blood in Proportion to the Quantity of it, that is taken. These are the natural Effects of drinking this spirituous Liquor.

§. 802. It is indeed very serviceable in MEDICINE both for *external*, and *internal* Uses, and deserves to be kept in the Shops of Apothecaries, as a needful Part of the *Materia Medica* : I have sometimes advised the Use of it with remarkable Success in Fevers attended with a *coïliquative* Looseness.

§. 803. In *July* 1723, when I lived in *Essex*, I was sent for to a Gentleman at *Malden*, aged near 70 Years, who was exceeding ill of a Fever. When I came to him, I found his Pulse very quick, his Tongue very dry and black ; he complain'd that he had a violent *Looseness*, and an unquench-  
able



able *Thirst*: He had drank abundantly of a Variety of Things, but found no Relief: His Thirst was as intolerable as ever; and he was perpetually going to *Stool*. I order'd that two Spoonfuls of *French Brandy* should be put into a Pint of Water, for his immediate Drink: He drank about two Thirds of it before he took the Cup from his Mouth, and resting a Minute or two, he drank the Remainder. It greatly abated his Thirst, and made his *Stools* less frequent. He said he never found so sensible a Refreshment from any Thing, as from that Water, and Brandy. I prescribed for him, and allowed him now, and then to take a Draught of the like Mixture for one Sort of Drink. God blessed my Advice to him, and he happily recover'd in a short Time.

§. 804. When *colliquative* EVACUATIONS have happen'd, I have often advis'd *Brandy* and *Water* with the like Success.

§. 805. I could say a great deal concerning the *medicinal* Uses of BRANDY, from my own Observation, but the mentioning them is foreign to my present Design; and I acknowledge that the Case related, (§. 803.) is a Digression from it: But I thought it of  
so

so much Importance to Mankind, and that so many useful Inferences might be made from it for the Benefit of Persons in Fevers attended with colliquative Evacuations, as made me willing to publish this little Part of my Experience; and to hope the Publick will excuse me for so doing.

§. 806. As for the Uses of *Brandy* with other Aliments, there are some Cases in which, as I said, it is proper; particularly the following.

§. 807. 1. When Persons have fed so much on *acid* Vegetables, as to render the Fibres of the Stomach, and Bowels too lax; and known to be so by having too many *Stools*; then the putting so much *Brandy* to *Water*, as will bring it to the Strength of small Beer, makes a suitable Drink for them.

§. 808. 2. When they have an *acid* Quality predominant in the Contents of their Stomach, and almost every Thing they eat, or drink, turns *sour* in it; and they have flatulent, griping Pains in the Stomach, or Bowels; then Water with some Brandy, as directed (§. 807.) makes a Liquor proper for their Drink, to be taken warm. Or



two Spoonfuls of *Brandy*, a Pint of *River Water*, and so much *Chalk* finely powder'd, as will lie on a Sixpence, or a Shilling, mixed together, and sweeten'd with double refin'd Loaf *Sugar* to the Palate, will be a proper Drink to be drank warm at their Meals, instead of Beer, so long as those Disorders continue.

§. 809. 3. When their Stomachs are so weak, as not to bear any solid Food ; and they have a Dislike of all Sorts of *Gruels*, *Broths*, *Panadas*, and such-like liquid Diet ; and *Milk* becomes the only Aliment, that will sit easy in their Stomachs ; then, if they need some Liquor that is spirituous, a Glass of *Water*, with so much *Brandy* as will bring it to the Strength of Wine, may be allowed ; or a spoonful or two of Brandy in a Pint of Milk may properly serve for the same Purposes, and prove very beneficial ; as it did in the Case of Mr. *Beach*. Vid. *Treatise of Painful Distempers*, §. 282, &c.

§. 810. But tho' BRANDY, diluted with a large Proportion of *Water*, or of *Milk*, may be very serviceable in the Cases described, (§. 807, 808, 809.) and, it may be, on other Occasions,



Occasions, and so long as those Occasions remain ; yet I must observe, that I do not know any one Case, that requires Brandy to be drank by itself, or undiluted with a spiritless Liquor. I look on Brandy taken into the Stomach by itself, always in some Measure injurious to it.

§. 811. But as for PERSONS that are *sanguine*, or *choleric*, who have a *firm Flesh*, *Fibres too tense*, and *Bowels costive*, they should not meddle with it in any Form.

§. 812. I have deliver'd my Sentiments on spirituous Liquors faithfully ; and I hope it is obvious to any one's Observation, that as I am not for a total Disuse of *Wine*, *Brandy*, and other spiritual Liquors, on the Account of the Abuses, which have been made of them ; so I do not in the least favour the Drinking any Drams at all ; nor the Drinking Wine, or any other spirituous Liquor, to the least Excess.

§. 815. What I have said concerning the drinking Brandy by itself, or undiluted, is applicable to *Juniper*, *Cinnamon*, *Aniseed Waters*, and indeed to all distilled strong Waters of equal Strength ; each of which sufficiently diluted, may in divers Cases

prove beneficial, tho' hurtful when taken by themselves.

§. 814. We should remember, that altho' the Use of *Brandy*, with other Aliments, may on divers Occasions be beneficial; yet that it is so far from contributing to the Dissolution of the *Stone*, that it rather abates the Force of the Dissolvents; as is evident from comparing the Experiments, in which it was an Ingredient, with others; which Consideration should make Persons careful, not only that they never use it unnecessarily, but also, that when they use it, they take a greater Quantity of some Dissolvents on that Account.

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## C H A P. XVI.

*Containing an Account of Experiments made with Calculi, and Verjuice ; also with a cold Infusion of Oatmeal, with Milk, with various Mixtures ; and with Decoctions both of Bohee, and Green Tea, with suitable Observations ; and likewise a Table of some Experiments, and a Distribution of the Things tried with Calculi, into three Classes.*

## E X P E R I M E N T CLXXXII.

§. 815. *JANUARY* 19, 1738-9, I put a *Calculus*, weighing two Grains and a Quarter, into a Mixture made with half an Ounce of VERJUICE, and an Ounce and half of *New River Water*.

§. 816. *February* 1, it was in a warm Digestion six Hours.



§. 817. *February* 3, it had a warm Digestion four Hours.

§. 818. *February* 6, it stood in a warm Digestion three Hours.

§. 819. *February* 9, I examin'd, and found it *hard*; but in handling, it broke into two Parts, which felt *hard*.

In Digestion 21 Days, and 13 Hours of it warm.

### EXPERIMENT CLXXXIII.

§. 820. *January* 24, 1738-9, I put a *Calculus*, weighing five Grains, into two Ounces of VERJUICE.

§. 821. *February* 1, it stood in a warm Digestion six Hours.

§. 822. *February* 3, it had a warm Digestion four Hours.

§. 823. *February* 6, it was in a warm Digestion three Hours.

§. 824. *February* 9, I examin'd, and found it as *hard* as ever.

In Digestion 16 Days, and 13 Hours of it warm.

§. 825. *Obs.* 1. From these EXPERIMENTS CLXXXII, CLXXXIII, it does not appear, that *Verjuice* has a Quality *dissolvent* of the Stone.

§. 826. *Obs.* 2. It seems, in my Apprehension, very reasonable to infer from these EXPERIMENTS, that *Verjuice*, tho' an *acid* Liquor, is very different in its Nature from the common *Vinegars* ; because they have the dissolvent Quality very strong, and active, which this has not.

#### EXPERIMENT CLXXXIV.

§. 827. *February* 27, 1738-9, I put a *Calculus*, of a pretty red Colour, weighing one Grain, together with a lesser, of about the fourth Part of its Weight, into two Ounces of Water, in which some *Oatmeal* had been infused cold for two Hours.

§. 828. *February* 28, they stood in a warm Digestion ten Hours.

§. 829. *March* 1, they had a warm Digestion nine Hours.

§. 830. *March* 2, they were six Hours in a warm Digestion.

§. 831. *March* 3, they had a warm Digestion five Hours.

§. 832. *March* 5, I examin'd them, and found the lesser *Calculus dissolved*, but the other as *hard* as ever. 1

In Digestion 6 Days, and 30 Hours of it warm.

§. 833. *Obs.* From this EXPERIMENT, (§. 827.) it appears, that a cold Infusion of *Oatmeal* may dissolve some Sort of *Calculi*. In the two former EXPERIMENTS, *viz.* CXXXVII, CXXXVIII, which I made with *cold Infusions* of OATMEAL, no Effect was produced: It happen'd otherwise in this. The Occasion of my making these Tryals, was the Request of a Gentleman, whose Friend had found great Benefit against *ne-phritick* Symptoms, by drinking daily a Draught of such an *Infusion* of OATMEAL sweetned with *Honey*.

## EXPERIMENT CLXXXV.

§. 834. *March* 20, 1738-9, I put a *Calculus*, weighing one Grain, into two Ounces



ces of MILK, with a smaller one *hard*, and of a reddish Colour.

§. 835. *March* 21, they stood in a warm Digestion eight Hours.

§. 836. *March* 22, they had a warm Digestion five Hours.

§. 837. *March* 23, they were six Hours in a warm Digestion.

§. 838. *March* 24, they stood in a warm Digestion eight Hours.

§. 839. *March* 26, they were eleven Hours in a warm Digestion.

§. 840. *March* 27, I examin'd, and found the larger Stone thoroughly *dissolved*, tho' to View it appear'd whole; yet it divided into a Sort of impalpable Power by feeling it; and the other was so much *softened*, that it broke into several Pieces with handling it, but they felt *hard*.

In Digestion 7 Days, and 38 Hours of it warm.

§. 841. *Obs.* The Effect of this Experiment confirms the Observation from Experiments LXIV, LXV, *viz.* That MILK has a Quality dissolvent of the Stone, and is

one proper Sort of Food for Persons troubled with it.

## EXPERIMENT CLXXXVI.

§. 842. *January 29, 1738-9, I put a Calculus, weighing four Grains and half, into a Mixture made with one Scruple of the SALT OF WORMWOOD, and two Ounces of New River Water.*

§. 843. *February 9, I examin'd, and found it hard, and return'd it into the Mixture.*

§. 844. *February 21, I examin'd it again, and found it as hard as ever.*

*In Digestion 23 Days.*

§. 845. *Obs.* It does not appear from this Experiment (§. 842.) that a Solution of the *Salt of Wormwood* will contribute any Thing to the dissolving of the Stone. I did not indeed expect it would, but had a Mind to prove it.

## EXPERIMENT CLXXXVII.

§. 846. *December 30, 1738, I put a Calculus, weighing four Grains and half, into*

a Mixture made with one Scruple of the *Salt of Wormwood*, half an Ounce of the *Juice of LIMONS*, and an Ounce and half of the *New River Water*.

§. 847. *January 4*, it stood in a warm Digestion twelve Hours.

§. 848, *January 5*, it had a warm Digestion ten Hours.

§. 849. *January 6*, it was six Hours in a warm Digestion, In the Evening I examin'd, and found it much *soften'd*, and Part of it dissolved.

In Digestion 7 Days, and 28 Hours of it warm.

§. 850. *Obs. 1.* From the last Experiment we may observe, that if, in a Mixture of Substances of contrary Properties, a Quality *dissolvent* of the *Stone* predominates, the Dissolution of the Stone may be accomplished: For in Experiment CLXXXVII, the *Salt of Wormwood*, and the *Juice of Limons*, are Substances of contrary Properties, but the dissolvent Quality of the *Juice of Limons* did predominate in that Mixture; and thereby its Effect was produced.

§. 851. *Obs. 2.* We may hence (§. 850.) infer, that altho' Persons should use some  
Sorts



Sorts of Aliment, which have (instead of a Quality dissolvent of the Stone) a Quality *petrifying*, and productive of it; yet if they use the dissolvent Sorts of Aliment so much, that the predominant Quality, communicated to their Urine, is *dissolvent*, they may notwithstanding, become free from the Stone.

### EXPERIMENT CLXXXVIII.

§. 852. *December 29, 1738, I put a Calculus, weighing one Grain and half, into an Ounce of a Mixture made with equal Parts of the Juice of LIMONS, and New River Water.*

§. 853. *December 30, it had a warm Digestion ten Hours.*

§. 854. *January 1, I examin'd, and found it dissolved.*

*In Digestion 3 Days, and 10 Hours of it warm.*

### EXPERIMENT CLXXXIX.

§. 855. *January 1, 1738-9, I put a Calculus, weighing four Grains, into the same Mixture,*

*Mixture*, (§. 852.) and set it in a warm Digestion eight Hours.

§. 856. *January* 3, it was nine Hours in a warm Digestion.

§. 857. *January* 4, I examin'd it; it came out of the Mixture whole, but broke into many Pieces by gently wiping it.

In Digestion 3 Days, and 17 Hours of it warm.

## EXPERIMENT CXC.

§. 858. *January* 26, 1738-9, I put a *Calculus*, weighing four Grains and half, into a Mixture made with an Ounce and half of *New River Water*, and two Tea-Spoonfuls of the *Juice* of LIMONS.

§. 859. *February* 1, it had a warm Digestion six Hours.

§. 860. *February* 3, it stood in a warm Digestion four Hours.

§. 861. *February* 6, it was three Hours in a warm Digestion.

§. 862. *February* 9, I examin'd it, when to View it appear'd whole; but when felt, was *soft*, and easily divided into very small Parts.

In Digestion 14 Days, and 13 Hours of it warm.

§. 863. *Obs.* 1. It appears from these Experiments CLXXXVIII, CLXXXIX, CXC, that the *Juice* of LIMONS diluted, or mixed with Water, as well as by itself, is a good *Dissolvent* of the Stone.

§. 864. *Obs.* 2. That therefore *Limonade* is a proper Drink for Persons troubled with this Distemper.

§. 865. *Obs.* 3. From Experiment CXC, it appears, that less than one Part of the *Juice* of *Lemons* to twelve of *Water*, will communicate a *dissolvent* Quality to the whole Mixture. The same may happen by a Mixture of a small Proportion of other Dissolvents with *River Water*.

## EXPERIMENT CXCI.

§. 866. *February* 27, 1738-9, I put a *Calculus*, weighing one Grain, together with a lesser of about one Quarter of a Grain, into two Ounces of a Mixture made with half an Ounce, by Measure, of a light  
YEAST,



YEAST, and an Ounce and half of *New River Water*.

§. 267. *February* 28, they stood in a warm Digestion ten Hours.

§. 868. *March* 1, they had a warm Digestion nine Hours.

§. 869. *March* 2, they were six Hours in a warm Digestion.

§. 870. *March* 3, they were in a warm Digestion five Hours.

§. 871. *March* 5, I examin'd them, and found the lesser Stone *dissolved*, and the other *hard*. The *Yeast*, which, on its first Mixture, was equally diffused thro' the Substance of the Water, was now subsided, and condensed at the Bottom of it.

In Digestion 6 Days, and 30 Hours of it warm.

§. 872. *Obs.* It seems from this Experiment CXCI, as if there was in *Yeast* a Quality dissolvent of the Stone; and probably it is from this Ingredient, that *Bread* derives its dissolvent Quality, since such a Quality did not appear to be in the *Decoction* of WHEAT tried with a *Calculus* in Experiment CXLI.

## EXPERIMENT CXCH.

§. 873. *January 24, 1738-9, I put a Calculus, weighing one Grain, into a Mixture made by dissolving twenty Grains of common SALT in two Ounces of New River Water.*

§. 874. *February 1, it stood in a warm Digestion six Hours.*

§. 875. *February 3, it had a warm Digestion four Hours.*

§. 876. *February 6, it was three Hours in a warm Digestion.*

§. 877. *February 9, I examin'd, and found it hard.*

*In Digestion 16 Days, and 13 Hours of it warm.*

## EXPERIMENT CXCHII.

§. 878. *The same Day (§. 873.) I put a Calculus, weighing one Grain, into a Mixture made by dissolving twenty Grains of fine Basket SALT in two Ounces of New River Water.*

§. 879. *It had the same Digestion both cold*

cold, and warm, with the *Calculus* in the last Experiment.

§. 880. *February* 9, I examin'd, and found it *hard*.

#### EXPERIMENT CXCIV.

§. 881. The same Day (§. 873.) I put a *Calculus*, weighing four Grains and half, into two Ounces of NEW RIVER WATER.

§. 882. It had the same Digestion both cold and warm, with the *Calculus* in Experiment CXCII.

§. 883. *February* 9, I examin'd, and found it *hard*.

#### EXPERIMENT CXCV.

§. 884. *December* 30, 1738, I put a *Calculus*, weighing half a Grain, into two Ounces of St. Paul's PUMP WATER, and set it in a warm Digestion nine Hours.

§. 885. *January* 1, it stood in a warm Digestion eight Hours.

§. 886. *January* 3, it was nine Hours in a warm Digestion.

Q

§. 887.



§. 887. *January* 4, I examin'd, and found it as *hard* as ever.

In Digestion 5 Days, and 26 Hours of it warm.

§. 888. *Obs.* 1. From EXPERIMENTS CXCII, CXCIII, it does not appear that Solutions of the *common*, or *basket* SALT have a Quality dissolvent of the Stone; notwithstanding that an *acid* Spirit is separable from it it by chymical Distillation.

§. 889. *Obs.* 2. From EXPERIMENTS CXCIV, CXCV, it does not appear, that either the *New River*, or the *Pump* WATER are capable of dissolving the Stone. It must be consider'd, that the Water we drink does not remain near so long in the Body, as the *Calculi* in Experiments CXCIV, CXCV, remain'd in the Water; and that altho' drinking Water may somewhat wash the urinary Vessels, yet that we have very little Reason to expect from it any Diminution of the Bulk of a *Calculus*, either in the Kidneys, or Bladder, unless by some Means the Water be endew'd with a *dissolvent* Quality before we drink it.

EXPERIMENT CXCVI.

§. 890. *March* 20, 1738-9, I put a *Calculus*, weighing five Grains, into two Ounces of a *Decoction* of pickled OLIVES.

§. 891. *March* 21, it had a warm Digestion eight Hours.

§. 892. *March* 22, it was in a warm Digestion five Hours.

§. 893. *March* 23, it was six Hours in a warm Digestion.

§. 894. *March* 24, it stood in a warm Digestion eight Hours.

§. 895. *March* 26, it was in a warm Digestion eleven Hours.

§. 896. *March* 27, I examin'd, and found it as *hard* as ever.

In Digestion 7 Days, and 38 Hours of it warm.

§. 897. I had been inform'd, that at LEGHORN some have used, with great Success against the *Stone*, and *Gravel*, WHITE WINE, in which unripe *Olives* (fallen from the Trees, gather'd and dried) had been in-

fused: This inclined me to make this Experiment.

## EXPERIMENT CXCVII.

§. 898. The same Day (§. 890.) I put a *Calculus*, weighing one Grain, into a Mixture made with half an Ounce of VINEGAR, and an Ounce and half of a *Decoction* of ONIONS.

§. 899. It had the same Digestion both cold and warm with the *Calculus* in the last Experiment.

§. 900. *March* 27, I examin'd, and found it *dissolved*.

§. 901. My Design in making this Experiment CXCVII, was to try, whether mixing together *Dissolvents* of very different Qualities would hinder the Dissolution of the Stone; and it was with Pleasure I observed in this Tryal that it did not.

§. 902. *Obs.* There appears, therefore, Reason for Persons to expect a good Effect from the Use of the dissolvent Aliments, tho



tho' some of them seem to be very different in their Nature.

§. 903. I shall in the next Place give an Account of some Experiments made with *Decoctions* of TEA; my Hopes having been disappointed in the Tryals I made with the *Infusions* of the Leaves in Experiments LVIII, LIX.

### EXPERIMENT CXCVIII.

§. 904. *March* 19, 1738-9, I put a *Calculus*, weighing one Grain, into two Ounces of a strong *Decoction* of BOHEE TEA.

§. 905. *March* 21, it had a warm Digestion eight Hours.

§. 906. *March* 22, it stood in a warm Digestion five Hours.

§. 907. *March* 23, it was six Hours in a warm Digestion.

§. 908. *March* 24, it had a warm Digestion eight Hours.

§. 909. *March* 26, it stood eleven Hours in a warm Digestion.

§. 910. *March* 27, I examin'd, and found it so much *softened*, that it broke into

Pieces with the feeling it ; but those little Parts were *hard*.

In Digestion 8 Days, and 38 Hours of it warm.

## EXPERIMENT CXCIX.

§. 911. The same Day (§. 904.) I put a *Calculus*, weighing one Grain, into two Ounces of a *Decoction* of GREEN TEA.

§. 912. It had the same Digestion, both cold and warm, with the *Calculus* in the last Experiment.

§. 913. *March* 27, I examin'd it ; some Sand came off from the Surface, but it was *not dissolved*.

§. 914. I must observe, that in making this *Decoction*, (§. 911.) twenty-six Grains of Tea were used, and put into the Water while it was *cold* ; and that notwithstanding the Boiling, the Leaves never opened, (tho' they were boiled a great while) but strongly retained their natural Taste ; and the Water tasted but a little of the Tea.

EXPERIMENT CC.

§. 915. The same Day (§. 904.) I put a *Calculus*, weighing one Grain, into two Ounces of a *Decoction* of GREEN TEA, made by putting the like Quantity of it (§. 914.) into *boiling* Water.

§. 916. It had the same Digestion, both cold and warm, with the *Calculi* in the two last Experiments.

§. 917. *March* 27, I examin'd, and found it *dissolved*. It look'd entire, but sunk into a soft Mash by gently putting my Finger on it to feel, whether it was *hard*.

§. 918. Another Event of making the *Decoction* in the Manner mentioned (§. 915.) was, that the Leaves of the Tea were thereby opened, and expanded, and lost their Taste; the contrary of which happen'd in making the *Decoction* in the Manner related, §. 914.

§. 919. It may deserve the Enquiry of the Curious, what may be the Reason, why a Thing to be decocted, should exhibit, or impart its Virtues, or Qualities to the Water, if put into it, when *boiling*; and retain



them so much, if put into the Water while cold.

§. 920. It is a common Observation in *Cookery*, that if *Sprouts*, or any other Herbs, are put into Water when *boiling*, and kept boiling briskly, they will boil green, and tender in a short Time; whereas those that are put into the Water *not* boiling, will turn yellow, and eat tough, though they afterwards are boiled a long Time.

§. 921. *Obs.* 1. But to return to my Subject: We may observe, that tho' TEA, as commonly drank; that is, the *Infusion* of it, has not a Quality dissolvent of the Stone, (*vid.* Experiments LVIII, LIX.) yet that the *Decoction* of TEA, made as in Experiment CC, is a good Dissolvent of it.

§. 922. *Obs.* 2. It appears from comparing the different Effects of Experiment CXCIX, with Experiment CC, that the best Way of making DECOCTIONS for *medicinal* and *alimentary* Uses, is by putting the Thing to be decocted, into the Water, while *boiling*.

§. 923.

§. 923. *Obs.* 3. That, consequently, it would contribute more to the Health of Persons for whom *Tea-drinking* is proper, to make it by putting the Tea into the Water when *boiling*, and then decocting it for some Minutes.

§. 924. Since the Writing this, I have look'd into Dr. KÆMPFER's History of *Japan*, where we have a large Account of this Plant. He says, "The *Tea*, as it is taken  
" inwardly, is prepared two different Ways.  
" The *first* is used by the *Chinese*, and is  
" nothing else but a simple *Infusion* of the  
" Tea Leaves in hot Water, which is  
" drank as soon as it hath drawn out the  
" Virtue of the Plant —

§. 925. "The other Way, which is peculiar to the *Japanese*, is by grinding: The  
" Leaves are a Day before they are used, or  
" the same Day, reduced into a fine delicate Powder by grinding them in a Hand-Mill. — This Powder is mixed with hot  
" Water into a thin Pulp, which is afterwards sip'd; — and it is that, which  
" all the rich People, and great Men in *Japan* daily drink. It is made, and served  
" up in Company in the following Manner:



“ ner : The *Powder* inclosed in a Box, and  
 “ the Rest of the *Tea-Table* Furniture is  
 “ brought into the Room, where the Com-  
 “ pany sits. Then all the Dishes are fill’d  
 “ with hot Water, and the Box being  
 “ open’d, they take out with a small neat  
 “ *Spoon*, about so much of the Powder as  
 “ would lay on the Point of a pretty large  
 “ Knife, and put it into every Dish. After  
 “ this they mix, and shake it with a curious  
 “ denticulated Instrument, till it foams, and  
 “ so present it to be sip’d, whilst it is  
 “ hot.

§. 926. “ There is still a third Way of  
 “ making the TEA by a perfect *Boiling*,  
 “ which goes farther than a simple *Infusion*,  
 “ and is used by the Vulgar, and countrey  
 “ People, who drink of it all Day long.

§. 927. “ Early in the Morning, and be-  
 “ fore Sun rise, one of the Domesticks  
 “ gets up, hangs the Kettle over the Fire,  
 “ fills it [with] Water, and puts in, either  
 “ the *Water* is *cold*, or after it hath been  
 “ made *hot*, two, three, or more Handfuls  
 “ of *Bantsja* [i. e. *Tea*] *Leaves*, accord-  
 “ ing to the Number of Heads in the Fa-  
 “ mily. At the same Time he puts in a  
 “ Basket,



“ Basket, of that Size, and Shape, which  
 “ exactly fits the Inside of the Kettle, by this  
 “ Means to keep the Leaves down to the  
 “ Bottom, that they should be no Hindrance  
 “ in drawing off the Water.

§. 928. “ This Kettle is to serve for the  
 “ whole Family all Day long to quench  
 “ their Thirst. Every one that has a Mind  
 “ to drink, goes there when he pleases,  
 “ and — takes out as much of the *Decoc-*  
 “ *tion*, as he will. A Bason of cold Wa-  
 “ ter is put by it, that in Case People have  
 “ not Time to sip it leisurely, they may  
 “ cool it to what Degree they please, and  
 “ quench their Thirst without Delay, by  
 “ taking large Draughts at once.

§. 929. “ Some leave the Basket out, and  
 “ instead of it, put the Leaves into a Bag,  
 “ which answers the same End. Only the  
 “ *Bantsja* Leaves must be *boiled* after this  
 “ Manner, because their Virtues are more  
 “ fix’d, and consisting chiefly of resinous  
 “ Parts, could not be well extracted by a  
 “ simple *Infusion*.” Vid. Dr. *Kæmfer’s*  
*Hist. of Japan*, translated by Dr. *Scheuchzer*,  
 Vol. 2. *Appendix*. p. 15, 16.

§. 930. “ To sum up the VIRTUES of this  
 “ Liqueur

“ Liquor in a few Words, (says Dr. *Kæmp-*  
 “ *fer*) it opens the Obstructions, cleanses  
 “ the Blood, and more particularly washes  
 “ away that *tartarous* Matter, which is the  
 “ efficient Cause of *calculous* Concretions,  
 “ *nephritick*, and *gouty* Distempers. This  
 “ it doth so very effectually, that among  
 “ the TEA-DRINKERS of this Country, [i. e.  
 “ *Japan*] I never met with any, who was  
 “ troubled either with the *Gout*, or *Stone*.  
 “ *ibid.* p. 17.

§. 931. I have try'd Experiments on *Calculi*, not only with vegetable *Menstrua*, but with others of different Denominations ; the Account of which being foreign to the Design of these Papers, I shall only mention the Event of four of them, which may give some Light to the Subject.

§. 932. *September 30, 1738*, I put a *Calculus*, weighing two Grains, into two Ounces of a very strong LIME WATER made by pouring only so much boiling Water on about half a Pound of *unslack'd Lime*, as that but little more than the Quantity wanted, did swim on the Surface of the *Lime* after it subsided. It stood in Digestion till the 27th of *December*, that is, twelve Weeks,

Weeks, and four Days. I examin'd it several Times, and always found it as *hard* as ever.

§. 933. This Experiment induced me to think that neither *Lime*, nor *Lime-Water* have a Quality dissolvent of the Stone.

§. 934. *Unslack'd* LIME, or Lime but a little slack'd, has a Quality *stimulating*, and if taken as a Medicine, in Cases where such a *Stimulus* is wanted, may do signal Service; but on the Account of that Quality, it must be improper, where a stimulating Medicine is like to produce those Effects, which will put the Life of a Person into Danger.

§. 935. *December* 28, 1738, I put a *Calculus*, weighing one Grain, into a Mixture made with white, hard SOPE dissolved in *New River Water*; which stood in Digestion nine Days, and twenty-eight Hours of it warm: But at last, when I examin'd it, I found it as *hard* as when put into the Mixture.

§. 936. The Issue of this Experiment, (§. 935.) makes me apprehend, that tho' a Solution of *Sope* has a Quality of mixing with, and dissolving some Substances, yet  
that



that it is not like to produce any considerable Effect in dissolving the human *Calculus*; tho' it is useful in divers Distempers as a *Dissolvent*; and also in Cases where the *Stimulus* of it is wanted.

§. 937. *September 8, 1738*, I put a *Calculus*, weighing two Grains, into a Mixture made with one Drachm (by Weight) of the SPIRIT OF HARTSHORN, and one Ounce of *New River Water*. It stood in Digestion till the 23d of *January*; that is, nineteen Weeks, and four Days. I examin'd it several Times, but always found it as *hard* as when it was first put into the Mixture. It had a warm Digestion five Hours.

§. 938. *September 8, 1738*, I put a *Calculus*, weighing somewhat more than two Grains, into a Drachm (by Weight) of the SPIRIT OF SALT AMMONIACK. Some *Air Bubbles* soon appeared to adhere to the Surface of the Stone. After a Quarter of an Hour, I poured into it an Ounce of the *New River Water*. It had the same Digestion, and as many Hours of it warm, with the *Calculus* in §. 937. I examin'd it divers Times, and even at the last, it was

as

as *hard* as in the Beginning of the Digestion.

§. 939. The Event of these Experiments, (§. 937, 938.) and the Consideration of the now known Qualities of *calculous* Concretions, and *gouty* Humours, convince me more and more, that *alkaline Spirits*, and *alkaline Salts* are very improper Remedies for curing either the STONE, or GOUT.

§. 940. The Importance of the SUBJECT of this *Treatise* has made me so particular, and large in my Account of Things. I must own, that the Experiments might have been made with more Exactness, if I could have kept the *Calculi* in an uninterrupted *Warmth* during their Digestion, and had Leisure to examine them two, or three Times a Day; But these Things were impracticable to me: I made the Experiments as well as my other Affairs, and Conveniences would allow; and hope considerable Advantage may redound from them, as they are.

§. 941. Many of the *Calculi*, tried in the Experiments, were indeed but small; not exceeding a Grain, or two in Weight, and some of them less; but I was under a Necessity of making my Tryals with such Materials



terials as I could get ; and I must observe, that a Stone, weighing but one Grain, is not so inconsiderable a Bulk as some may imagine, who never have seen such an one. I have had several terrible Fits of the *Stone*, and never voided one that I had Reason, by its Appearance, (for I never thought of weighing any of them) to think it weighed more.

§. 942. I may add, that the Liquor, which can dissolve a *Calculus* of one Grain, can dissolve another of many Ounces Weight, of the same Contexture, if there be enough of it.

§. 943. I thought to have given TABLES of the several Setts of Experiments, that every one might more fully be convinced, that the Event of any of the Experiments did not depend on the Minuteness of the *Calculi*, but on the Quality of the Liquors in which they were digested, and the Quality of their own Contexture : But for Brevity's Sake, I shall only give one, as a *Specimen* ; and then a general View of the Result of my Enquiries, by dividing the Things, that have been tried on *Calculi*, into three Classes, *viz.*  
the



the *stronger*, and the *weaker* DISSOLVENTS, and the NON-SOLVENTS.

§. 944. I will only further observe, that among the Experiments, there are divers Instances of larger *Calculi dissolved*, and of smaller remaining *undissolved*, and *hard*; which had the same Digestion cold and warm; which is a Thing deserving Notice, and which may in some Measure be seen in the following Table.

§. 945. The following *Calculi* were together in Digestion 8 Days, and 38 Hours of it warm.

<i>The Weight of</i>		<i>The Liquors.</i>	<i>The Event.</i>
Calculi.			
Expt. 172	gr. 1. $\frac{3}{4}$	— <i>Monmouthshire</i> Cyder —	hard
173	gr. 1.	— Ditto, and Water —	dissolved
174	gr. 2. $\frac{1}{4}$	— <i>Southam</i> Cyder N <sup>o</sup> 1. —	hard
175	gr. 1. $\frac{1}{4}$	— Ditto, and Water —	soften'd
176	gr. 6. $\frac{1}{4}$	— <i>Southam</i> Cyder N <sup>o</sup> 2. —	soften'd
177	gr. 2. $\frac{1}{4}$	— Ditto, and Water —	hard
178	gr. 5.	— <i>Herefordshire</i> Cyder —	dissolved
179	gr. 1. $\frac{1}{4}$	— Ditto, and Water —	hard
180	gr. 4.	— <i>Glocestershire</i> Cyder —	hard
181	gr. 1.	— Ditto, and Water —	hard
185	gr. 1.	— Milk — — —	dissolved
198	gr. 1.	<i>Decoction</i> of Bohea Tea --	soften'd
199	gr. 1.	Ditto of Green Tea, -	{ Sand came from it.
200	gr. 1.	Ditto of Green Tea, -	
			dissolved

§. 946. It is very observable in this Table, that some of the larger Stones have dissolved, while some of the smallest of them remained *hard*; which shews, that the Dissolution of a *Calculus* is not owing to its Minuteness, but to the Quality of the Liquor in which it is digested.

§. 947. I now proceed to the several Classes of Things, wherewith I made my Experiments on *Calculi*; which are as follows.

## I. CLASS.

§. 948. Containing a general Account of the *stronger* DISSOLVENTS of the STONE.

Liquors.	Number of the Experiments.	Weight of <i>Calculi</i> .	Time of Digestion.		Event.
			Days.	Hours warm.	
BREAD, its <i>Infusion</i> ,	51	gr. 1.	7	27	dissolved
Ditto,	52	gr. 1.	7	27	dissolved
Ditto,	53	gr. 6. $\frac{1}{2}$	2 $\frac{1}{2}$	28	dissolved
Ditto,	54	gr. 1.	2 $\frac{1}{2}$	28	dissolved
CELLERY, its <i>Juice</i> ,	72	gr. 3.	3	28	dissolved
its <i>Decoction</i> ,	73	gr. 1 $\frac{1}{4}$	3	28	dissolved
CODLINS, its <i>Juice</i> ,	15	gr. 7	23	—	dissolved
Ditto,	16	gr. 6	14	—	dissolved
Cu-					

Liquors.	Number of the Experiments.	Weight of Cal- culi.	Time of Digestion.		Event.
			Days.	Hours warm.	
CUCUMBERS, its Juice,	74	gr. 1	3	—	dissolved
Ditto,	75	gr. 7	6	—	dissolved
CURRANTS foreign, } its Decoction,	79	gr. 4 $\frac{1}{2}$	3	28	} dissolv'd to gr. 1.
CYDER, Herefordshire,	13	gr. 8	30	8	dissolved
Ditto,	14	gr. 11	23	5	dissolved
Ditto,	178	gr. 5	8	38	dissolved
Monmouthshire,	169	gr. 37	25	28	} dissolv'd to gr. 8.
Ditto,	170	gr. 1	23	28	dissolved
Ditto & Water,	173	gr. 1	8	38	dissolved
Ditto & Water,	171	gr. 1	24	28	dissolved
Southam,	176	gr. 6 $\frac{1}{4}$	8	38	soften'd
FIGS, their Decoction,	119	gr. 7 $\frac{1}{4}$	3	28	} much softned
GRAPES white, their } Juice,	33	gr. 6	23	—	dissolv'd
HOPS, Decoction,	147	gr. 5 $\frac{1}{2}$	3	28	dissolved
LEEKs, their Juice,	85	gr. fl.	3	—	dissolved
Ditto,	86	gr. 3	6	—	dissolved
Ditto,	87	gr. 19	24	5	dissolved
Ditto,	88	gr. 4	20	5	dissolved
Ditto,	89	gr. 2 $\frac{1}{2}$	105	5	dissolved
Ditto,	91	gr. 7 $\frac{3}{4}$	6	27	soften'd
Ditto,	93	gr. 6	6	27	soften'd
Decoction,	90	gr. 2 $\frac{1}{4}$	3	10	dissolved
Ditto,	92	gr. 4	3	10	dissolved
Infusion,	95	gr. 19 $\frac{1}{4}$	6	27	dissolved
LETTICE Cabbage, } its Juice,	80	gr. fs.	3	—	dissolv'd



Liquors.	Number of the Experiments.	Weight of Cal- culi.	Time of Digestion.		Event.
			Days.	Hours warm.	
LETTICE <i>Cabbage,</i> }	81	gr. 10	6	—	dissolved
its <i>Juice,</i>					
Ditto,	82	gr. 4	24	5	dissolved
Goss, <i>Juice,</i>	83	gr. 14	26	5	dissolved
Ditto,	84	gr. 4	20	5	{ a little soften'd
LIMONS, the <i>Juice,</i>	4	gr. 10	24	5	dissolved
Ditto,	5	gr. 7	96	5	{ dissolved <i>vid. §. 61</i>
Ditto,	6	gr. 16	83	—	dissolved
Ditto,	7	gr. 8 $\frac{1}{2}$	9	—	dissolved
Ditto,	8	gr. 66	23	—	soften'd
Ditto,	10	gr. 7, } gr. 3 }	14	—	dissolved
Ditto & <i>Honey,</i>	1	gr. 10	28	—	dissolved
Ditto & <i>Water,</i>	188	gr. 1 $\frac{1}{2}$	3	10	dissolved
Ditto,	189	gr. 4	3	17	dissolved
Ditto,	190	gr. 4 $\frac{1}{2}$	14	13	dissolved
MILK,	64	gr. 1 $\frac{3}{4}$	2 $\frac{1}{2}$	27	dissolved
Ditto,	65	gr. 1	6	30	dissolved
Ditto,	185	gr. 1	7	38	dissolved
MULBERRIES, }	17	gr. 8	5	—	dissolved
their <i>Juice,</i>					
Ditto,	18	gr. 7	20	—	dissolved
Ditto,	19	gr. 9	29	5	{ Bulk di- minish'd
Ditto,	20	gr. 19	32	—	dissolved
Ditto,	21	gr. 16	32	—	dissolved
Ditto & <i>Water,</i> }	23	gr. 1 $\frac{1}{4}$	3	7	dissolved
& <i>Brandy</i>					
Ditto & <i>Water,</i>	24	gr. 1	3	7	dissolved

MULBERRY

Liquors.	Number of the Experiments.	Weight of Cal- culi.	Time of Digestion.		Event.
			Days.	Hours warm.	
MULBERRY Wine,	22	gr. 1	3	7	dissolved
NON-PARELLS, the Decoction,	49	gr. 6	24	27	dissolved
ONIONS, the Juice, and Water,	100	gr. 8	8	28	dissolved
its Decoction,	101	{ gr. 1 gr. 1 }	23	—	{ dissolv'd dissolv'd
— the Decoction with Vinegar,	197	gr. 1	7	38	dissolved
ORANGES, Seville, their Juice,	126	gr. 4	14	13	dissolved
Ditto & Water,	127	gr. $\frac{3}{4}$	5	—	dissolved
Ditto,	128	gr. $5\frac{1}{2}$	9	13	dissolved
— China, Juice,	129	gr. 2	5	—	dissolved
Ditto,	130	gr. 6	9	13	soften'd
Ditto & Water,	131	gr. $1\frac{1}{4}$	14	13	hard
PEARS, Burgamy, the Juice,	32	gr. $2\frac{1}{2}$	11	—	dissolved
PUNCH with Honey,	2	gr. 4	28	—	dissolved
Ditto,	3	gr. 14	62	—	dissolved
RADISHES, Garden, the Decoction,	115	gr. 3	23	27	dissolved
RAISINS, the Decoction,	118	gr. $4\frac{1}{2}$	3	28	dissolved
SORREL, common, its Juice,	122	gr. 10	9	27	{ partly dissolv'd
Ditto,	123	gr. $8\frac{1}{2}$	27	5	dissolved
— WOOD, its Juice,	124	gr. 1	9	—	dissolved
TURNIPS, the Juice,	11	gr. 3	20	—	dissolved
Decoction,	12	gr. 5	35	5	dissolved
TEA Green, Decocti- on, the Leaves put in to the Water boiling,	200	gr. 1	8	38	dissolved

VINEGAR,

Liquors.	Number of the Experiments.	Weight of Cal- <i>culi.</i>	Time of Digestion.		Event.
			Days.	Hours warm.	
VINEGAR,	29	gr. 3 $\frac{1}{2}$	10	—	dissolved
Ditto,	30	gr. 3	3	11	dissolved
WINE, <i>White Port</i> ,	158	gr. 1	6	30	dissolved
Ditto and <i>Water</i> ,	159	gr. 4 $\frac{1}{2}$	6	30	dissolved

## II. CLASS.

§. 949. Containing a general Account of the *weaker* DISSOLVENTS of the STONE.

Liquors.	Number of the Experiments.	Weight of Cal- <i>culi.</i>	Time of Digestion.		Event.
			Days.	Hours warm.	
ASPARAGUS Roots, } Juice,	38	gr. 4 $\frac{1}{2}$	23	—	dissolved
CABBAGE, <i>common</i> , } its Juice,	66	gr. 4 $\frac{1}{2}$	20	5	dissolved
Ditto, <i>Decoction</i> ,	67	gr. 3	3	11	soften'd
— <i>red</i> , its <i>Decoction</i> ,	69	{ gr. 3 } { gr. $\frac{1}{4}$ }	2 $\frac{1}{2}$	27	{ hard dissolv'd
CARROTS, its Juice,	70	gr. 1	3	11	diminish'd
COCO, <i>Decoction</i> ,	63	gr. 1	6	31	dissolved
COFFEE,	60	gr. 11	53	5	{ Sand came from it.
Ditto,	61	gr. 1	7	27	hard
CHOCOLATE,	62	gr. $\frac{3}{4}$	6	31	dissolved
					CYDER,



Liquors.	Number of the Experiments.	Weight of Cal- culi.	Time of Digestion.		Event.
			Days.	Hours warm.	
CYDER, <i>Glocestershire</i> ,	180	gr. 4	8	38	{ Sand came from it.
Ditto, <i>Southam</i> , and <i>Water</i> ,	175	gr. $1\frac{1}{4}$	8	38	{ Sand came from it.
ELDERBERRY, its <i>Juice</i> ,	31	gr. 15	34	5	dissolved
GOLDEN PIPPIN, its <i>Juice</i> ,	44	gr. 48	3	11	{ part dissolved.
Decoction,	47	{ gr. 3 } { gr. 1 }	3	28	{ hard dissolv'd
GOLDEN RENNET, its <i>Decoction</i> ,	43	gr. $1\frac{3}{4}$	44	11	{ Sand came from it.
HONEY, & <i>Water</i> ,	36	gr. 30	30	7	{ Part dissolved.
MALLOW <i>Leaves</i> , their <i>Juice</i> ,	132	gr. 11	2	—	soften'd
Decoction,	134	gr. 1	3	11	soften'd
— Gruel,	133	gr. 9	2	—	soften'd
MALT, & HOPS, <i>Decoction</i> ,	146	{ gr. $\frac{1}{2}$ } { gr. $\frac{1}{2}$ }	3	28	{ hard dissolv'd
MULBERRY <i>Bran- dy</i> , and <i>Water</i> ,	25	gr. 1	3	7	soften'd
MIXTURE of Salt of <i>Wormwood</i> , <i>Juice</i> of <i>Limons</i> , & <i>Water</i> ,	187	gr. $4\frac{1}{2}$	7	28	dissolved
NON-PARELL <i>Tea</i> ,	50	{ gr. $\frac{3}{4}$ } { gr. $\frac{1}{4}$ }	6	27	{ hard dissolv'd
ONION, its <i>Juice</i> ,	96	gr. 3	9	—	{ diminish'd
Ditto,	97	gr. 10	20	5	{ Sand came from it.
Ditto,	98	gr. 2	44	11	{ much diminish'd

ONIONS,

Liquors.	Number of the Experiments.	Weight of Cal- culi.	Time of Digestion.		Event.
			Days.	Hours warm.	
ONIONS, its Juice,	99	gr. 1	7	28	dissolved
OATMEAL whole, } its Decoction,	136	gr. 1	3	28	dissolved
—— Infusion,	184	{ gr. 1 gr. $\frac{1}{4}$ }	6	30	{ hard dissolv'd
PARSLEY Roots, } their Juice,	41	gr. 7	35	5	dissolved
Decoction,	108	gr. 1	25	27	dissolved
Infusion,	107	gr. 1 $\frac{1}{4}$	25	27	hard
LEAVES, their } Juice,	39	gr. 31	26	7	hard
Ditto,	40	{ gr. 2 gr. 2 }	35	5	{ soft soft
—— Decoction,	110	gr. 2	6	27	dissolved
—— Infusion,	109	gr. 1 $\frac{1}{4}$	25	27	dissolved
PARSNIPS, their } Juice,	105	{ gr. 2 gr. $\frac{1}{4}$ }	36	27	{ hard dissolv'd
—— Decoction,	106	{ gr. 2 gr. $\frac{1}{4}$ }	36	27	{ hard dissolv'd
POTATOES, their Juice	111	gr. 1	3	11	soften'd
—— Decoction,	112	gr. 1 $\frac{1}{4}$	3	11	soften'd
PEARL - BARLEY, } Decoction,	139	{ gr. 1 gr. $\frac{1}{4}$ }	2 $\frac{1}{2}$	27	{ broke dissolv'd
Ditto,	140	gr. $\frac{3}{4}$	2 $\frac{1}{2}$	27	{ Sand came from it.
RICE, its Decoction,	142	gr. 1	3	28	dissolved
STRAWBERRIES, } their Juice,	26	gr. 2	20	—	soften'd
—— Brandy,	27	gr. 1	3	11	broke

TEA

Liquors:	Number of the Experiments.	Weight of <i>Cal- culi.</i>	Time of Digestion.		Event.
			Days.	Hours warm.	
TEA, <i>Bohea</i> , the } <i>Decoction</i> ,	198	gr. 1	8	—	broke
GREEN, its <i>De-</i> } <i>coction</i> ,	199	gr. 1	8	—	soften'd
WINE, <i>Red Port</i> ,	148	gr. 2 $\frac{1}{8}$	14	13	soft
Ditto and <i>Water</i> ,	149	gr. 1	14	13	dissolved
—— <i>Tent</i> ,	152	gr. 2	6	30	soften'd
—— ELDERBER- } RY & <i>Water</i> ,	168	gr. 1	2 $\frac{1}{2}$	28	dissolved
—— CANARY,	156	gr. 6 $\frac{3}{4}$	6	30	soften'd
Ditto & <i>Water</i> ,	157	gr. 1	6	30	soft
—— MEDERA, & } <i>Water</i> ,	155	gr. 4 $\frac{1}{4}$	6	30	soft
—— RHENISH, & } <i>Water</i> ,	161	gr. 2 $\frac{1}{2}$	6	30	soften'd
—— RAISIN,	164	gr. 1 $\frac{7}{8}$	9	28	soft
Ditto,	165	{ gr. 2 $\frac{1}{4}$ gr. $\frac{3}{4}$ }	21	13	{ hard dissolv'd
Ditto & <i>Water</i> ,	166	gr. 1	16	13	dissolved
YEAST & <i>Water</i> ,	191	{ gr. 1 gr. $\frac{1}{4}$ }	6	30	{ hard dissolv'd

§. 950. What I mean by the Word *dissolved*, in the Column of Events, (§. 948, 949.) is such a Dissolution of the Cohesion of the Parts of the *Calculus*, that it broke into a Sand, or very small Parts by a gentle  
S Feeling



Feeling it ; tho' some of those little Parts sometimes felt hard ; likewise that it was only a *cold Digestion* used in those Experiments, where there is no Number in the Column of *Hours warm*.

### III. CLASS.

§. 951. Containing a general Account of those Things, which were tried, and discover'd no Quality dissolvent of the STONE.

Liquors.	Number of the Experiments.	Weight of <i>Cal-culi</i> .	Time of Digestion.		Event.
			Days.	Hours warm.	
BARLEY, its <i>Decoction</i> ,	144	gr. 1	3	28	hard
BEER <i>Small</i> ,	55	gr. 3	9	27	hard
Ditto,	56	gr. 2 $\frac{1}{2}$	16	13	hard
Porter,	57	gr. 2 $\frac{3}{4}$	9	27	hard
CABBAGE <i>red</i> , its <i>Juice</i> ,	68	gr. 2 $\frac{1}{2}$	2 $\frac{1}{2}$	27	hard
CURRANTS <i>red</i> , their <i>Juice</i> ,	76	gr. 3	9	—	hard
CYDER <i>Southam</i> , one Sort of it,	174	gr. 2 $\frac{1}{4}$	8	38	hard
GOLDEN PIPPIN, its <i>Juice</i> ,	46	gr. 3	3	28	hard

# III. Class, of the Non-solvents. 251

Liquors.	Number of the Experiments.	Weight of Cal- culi.	Time of Digestion.		Event.
			Days.	Hours warm.	
GOLDEN PIPPIN, } its <i>Infusion</i> ,	45	gr. 4 $\frac{1}{2}$	7	27	hard
GOLDEN RENNET, } its <i>Juice</i> ,	42	gr. 7	3	11	hard
HORSE RADISH } Root, its <i>Decoction</i> ,	116	gr. $\frac{3}{4}$	14	13	hard
———— a stronger } <i>Decoction</i> ,	117	gr. $\frac{3}{4}$	14	13	hard
MALT, its <i>Decoc-</i> } <i>tion</i> ,	145	gr. 1	3	28	hard
MILLET SEEDS, } their <i>Decoction</i> ,	143	gr. 1	3	28	hard
NON-PARELL } <i>Juice</i> ,	48	{ gr. 1 $\frac{1}{2}$ } gr. $\frac{1}{2}$	6	27	hard
OATMEAL, its <i>In-</i> } <i>fusion</i> ,	137	gr. 5	3	28	hard
Ditto,	138	gr. 1 $\frac{3}{4}$	2 $\frac{1}{2}$	27	hard
OLIVES, their <i>De-</i> } <i>coction</i> ,	196	gr. 5	7	—	hard
ONION Tea,	103	gr. 5	7	27	hard
Ditto,	104	gr. 8	7	27	hard
PARSLEY Root Tea,	107	gr. 1 $\frac{1}{4}$	25	27	hard
RUE, its <i>Juice</i> ,	9	gr. 7	29	8	hard
SALT of WORM- } WOOD & <i>Water</i> ,	186	gr. 4 $\frac{1}{2}$	23	—	hard
SALT & <i>Water</i> ,	192	gr. 1	16	13	hard
Ditto,	193	gr. 1	16	13	hard
SPINACH, <i>Juice</i> ,	120	gr. 1	3	11	hard
———— <i>Decoction</i> ,	121	gr. 1	3	11	hard
TEA, GREEN, its } <i>Infusion</i> ,	58	gr. 1 $\frac{1}{2}$	7	27	hard
Ditto,	59	gr. 1 $\frac{1}{2}$	3	18	hard

252 III. *Class, of the Non-solvents.*

Liquors.	Number of the Experiments.	Weight of Cal- culi.	Time of Digestion.		Event.
			Days.	Hours warm.	
VERJUICE & <i>Water</i> ,	182	gr. 2 $\frac{1}{4}$	21	13	hard
— without <i>Water</i> ,	183	gr. 5	16	13	hard
WATER, <i>New River</i> ,	} 37	gr. 1 $\frac{1}{4}$	3	11	hard
Ditto,		194 gr. 4 $\frac{1}{2}$	16	13	hard
— St. <i>Paul's Pump</i> ,	195	gr. $\frac{1}{2}$	5	26	hard
WATER GRUEL,	135	gr. 3	3	11	hard
WHEAT, its <i>Decoction</i> ,	} 141	gr. 1	3	28	hard
WINE, CURRANT,		77 gr. 2 $\frac{1}{4}$	9	28	hard
Ditto & <i>Water</i> ,	78	gr. 3 $\frac{1}{4}$	26	28	hard
— ELDERBERRY,	167	gr. 2 $\frac{1}{4}$	9	27	hard
— LEEK,	94	gr. 12 $\frac{1}{2}$	25	28	hard
— MEDERA,	154	gr. 6	6	30	hard
— MOUNTAIN,	162	gr. 2 $\frac{1}{4}$	6	30	hard
Ditto & <i>Water</i> ,	163	gr. 1 $\frac{1}{2}$	6	30	hard
— RHENISH,	160	gr. 4	6	30	hard



## C H A P. XVII.

*Containing general Observations  
from the Experiments, with Re-  
marks on the Use of Things  
strongly stimulating.*

§. 952. **I**N the Course of the EXPERI-  
MENTS related, I have been  
often disappointed in my Hopes ; and many  
Times the Event of my Tryals was very  
pleasing, tho' not expected. For I found a  
strong dissolvent Quality in some Things,  
which I thought had nothing of it ; and  
in others, from which I had great Expecta-  
tions, I did not discover any Thing of it.

§. 953. However, some of those Things,  
which produced no Effect on the *Calculi*,  
wherewith I tryed them, may possibly be  
able to dissolve others of a different Con-  
texture.

§. 954. It don't seem a just Conclusion,  
that they have no dissolvent Quality, meerly  
because they did not discover such a Quality  
in the Experiments I made with them. All

that I would affirm is, that in those Experiments such a Quality did not appear.

§. 955. But as to those Things, which produced an Effect on the *Calculi*, that were put into them, I may justly assert, that they have a *dissolvent* Quality : Not that I think any one of them capable of dissolving all Kinds of such Concretions ; but the Instances, in which they succeeded, prove them capable of dissolving some Sorts of them.

§. 956. It has been Matter of Surprise and Speculation to me, when I have observed VEGETABLES of very *different* Natures, and Properties, capable of destroying that firm Cohesion, which is between the constituent Parts of human *Calculi*, which are Concretes so compact, and their Parts so strongly combined together, that they have eluded the Contrivances of many learned, and curious Men, to dissolve them.

§. 957. But the foregoing EXPERIMENTS clearly prove, that compact, and hard as they are, they are *dissoluble*, and dissoluble by Things the most mild, and gentle in their own Nature, and most suitable, and benign to the Nature of our Bodies ! Things  
in



in common Use as Aliment. Happy Discovery! to find proper, and, in all Probability, effectual Remedies against two of the most painful, and torturing Diseases we are liable unto: I say, to find these among the Sorts of Aliment, by which our Bodies are daily nourish'd, and refreshed! This demands our thankful Acknowledgments to God, for so making, and preparing Food for us! and for making known to us, that so much of it is endowed with a Quality adapted to relieve us from the Misery both of the *Stone* and *Gout*, and indeed suited to cure, or prevent many other Distempers.

§. 958. But I must observe, that when I was contemplating the Nature of the *Calculus*; and observing that very different Sorts of Things proved effectual to dissolve it, my Mind was lead to enquire, how the *STONE*, by *Dissolvents* of different Properties, could have the Cohesion of its Parts so thoroughly destroy'd.

§. 959. And in considering this Subject, it appear'd to me, that the *Calculus* may be dissolved *four* different Ways, since every *Calculus* is compounded of four different



Sorts of Particles, *viz.* of *Air*, *animal*, *alkaline Salt*, *animal Oil*, and *Earth*, as I have before noted.

§. 960. I apprehend the *Calculus* may be dissolved by whatever separates the Particles of the *AIR*, and forces that Fluid out of it, as it happen'd in some of the Experiments made by Dr. HALEs; particularly Experiment I. Vol. II. p. 191.——For as the Particles of *Air* are intermixed with the other Sorts of the component Parts of this Concrete; so when they are dislodged, and forced to pass out of it, there will in Consequence thereof be void Spaces, or Distances between the other component Particles of it; that is, it will be dissolved.

§. 961. If any imagine, that the Particles of the remaining Sorts of the component Parts of the *Calculus* may attract each other, unite together, and close up the void Spaces, and so become a compact hard Substance, tho' not so large in Bulk as it was before the *Air* was separated from it, they should consider, that *AIR* is one *essential* Part of this Concrete, and that there never was a *Calculus* found, in which, upon Tryal, it was not a principal constituent Part of it.

§. 962.

§. 962. I will not pretend to shew what particular Use the Particles of *Air* have in constituting this Concrete. Whether they are as Bands of Union between the other Parts, or not ; or whether they *attract*, or are *attracted* by the other component Parts of it : But *Air* appears to me so necessary a constituent Part of some stoney Concretes, that if we can separate it from them, their other Parts will fall asunder, as it happen'd in the Experiments I made with the *Juice* of *Lemons* on some fossile Stones : (*vid.* §. 8, *ad* 15.) or, if they remain in a *Juxta-Position*, it will be without any Force of Cohesion, as it happen'd in the Dissolution of divers *Calculi* related in the foregoing Account of my Experiments, (*vid.* an Instance, Experiment IV. §. 41.

§. 963. I may observe, that the Degree of Heat, which, in chymical Processes, forces the *Air*, the *alkaline Salts*, and *Oil* of a *Calculus* to separate, divide and ascend, and leave the Earth, or *Caput mortuum* behind, may be said to dissolve it : But such Heat, and such Methods of Dissolution are of no Use in the Affair under our present Consideration.



§. 964. How far any of those vegetable Substances, in which I have found a Quality dissolvent of the Stone, may act on the Particles of Air, which enter the Composition of it, I cannot say ; but if they occasion the Particles of *Air* to dislodge and and fly off from it, I apprehend the Dissolution of it will be the natural, and unavoidable Consequence.

§. 965. It seems to me no difficult Matter to imagine, that separating the Particles of *Air* may be one Way in which the Contexture of a *Calculus* may be unravelled, or dissolved.

§. 966. 2. Another Sort of CAUSES by which a *Calculus* may be dissolved, are those Things, which alter the Texture, and Figuration of the *alkaline Salts* in it : For it is easy to understand, that the Causes, which produce such an Effect, may destroy the Cohesion of the Particles of the *alkaline Salts* with the Particles of *Air*, *Oil*, and *Earth*. And this seems to be the Way of Solution, when *Calculi* are dissolved by Means of *Acids* ; and very likely the Action of acid Liquors on human *Calculi* might occasion the Particles of *Air* to separate, and ascend



ascend from them, as in the Solution of the *fossile* Stones by the *Juice* of *Lemons*, tho' the Separation of the Air was not discernable in the Experiments on *Calculi*, as in those. That there was a Separation of the Air may well be concluded, notwithstanding its Ascent in the dissolving Liquors was not evident by Air-Bubbles.

§. 967. 3. A third Sort of CAUSES, productive of the Dissolution of a *Calculus*, may be those Things, which destroy the Figure, and Quality of the Particles of *animal Oil*, which are component Parts of it; because a Dissolution of the Stone seems to be a natural, and unavoidable Consequence of destroying the Figure and Properties of any one essential Part of it.

§. 968. This (§. 967.) seems to be the Way, when a *Calculus* is dissolved, by Means of *Onions*, *Leeks*, *Cabbage*, or any Vegetables of the like Nature: The dissolving Particles of such Vegetables may act on the Particles of the *animal Oil*, which are in this *Concrete*, as the *acid* Particles of an acid Dissolvent act on the Particles of *alkaline Salts*; and in this Manner accomplish the Dissolution of it.

§. 969. 4. There is yet another Way, in which a *Calculus* may be dissolved; that is, by those Things, which may attract the Particles of *Earth*, which are intermixed with the other component Parts of it more strongly than they attract, or are attracted by the other Particles they cohere with.

§. 970. I apprehend, considering the great Variety of the DISSOLVENTS, that the *Calculus* may be sometimes dissolved by one of the aforementioned Ways, and sometimes by another, according to the Nature of the dissolvent Aliments used by the Patient.

§. 971. It may be impossible to explain how the Particles of *four* such different Sorts of Substance (as constitute and make the Contexture of a *Calculus*) come to unite and cohere so strongly together, as to form such a *Stone-like* Matter. But it is certain, that no two Particles separate, and distant from each other, can unite closely, and strongly, unless there be a strong attracting Force in one, or both of them; much less could the Particles of a greater Number of different Sorts of Substances unite together to the Formation of such a compact Concrete,



crete, unless there was a strongly *attracting Quality* in some, or all of the Sorts of Particles that united, and cohered.

§. 972. And as the attracting Force depends on the particular Form, or Figure, and Nature of such Particles ; so it follows, that if we can obtain an Alteration of their Figure, and Nature, we may destroy their attracting Force ; and consequently dissolve such Substances, the Cohesion of whose Parts depends on such an attracting Force, or Power.

§. 973. There are various Sorts of *Calculi*, and of different Degrees of Hardness, and those Things which are capable of dissolving some of them, we see are not able to produce any Effect on some others : But as there is a great Variety of DISSOLVENTS among the Sorts of ALIMENT in common Use ; so we have Reason to hope there is no *Calculus*, but that one Sort or other of our Aliments may be able to dissolve it.

§. 974. Persons, indeed, that have voided no *Calculi*, can't know which Sorts of the DISSOLVENTS are most proper for them ; and therefore such will act prudently, if they intermix



intermix the Use of the different Sorts of the most active Diffolvents.

§. 975. But they who have voided Stones, or Fragments of them, have an Opportunity, by proper Tryals with them, of finding out which Sorts of Diffolvents are like to be most effectual for their Cure.

§. 976. It is very observable, that there is a great Variety in the Degrees of the dissolvent Force of different Vegetables ; and that in the *Juices*, or *Decoctions* of several of them, the dissolvent Quality is very active.

§. 977. As to the Stones, dissolved by the successful Experiments, several of them, very likely, were dissolved some time before I examined them ; but I had not Leisure to examine them every Day.

§. 978. I may add, that if I could have given them a continued Warmth equal to that of the Blood, the Dissolution of them would, in all Probability have been accomplished in much less Time.

§. 979. Nevertheless, the Dissolution of several *Calculi* was accomplish'd in a very few Days, as will appear to those, who read the Experiments.

§. 980. And it deserves Notice, that the mixing a very small Quantity of a dissolvent Liquor with a large Quantity of Water, communicated a dissolvent Quality to the Whole, and render'd it strongly dissolvent, (*vid.* §. 858, 862.) which gives us Ground to hope, that a Quality *dissolvent* of the Stone may be communicated to the *Urine* of Persons afflicted with it, by mixing the dissolvent Aliments with others in their Diet.

§. 981. For which Reason I do not apprehend it necessary for Persons to live wholly on those particular Sorts of VEGETABLES, in which the dissolvent Quality has been discover'd.

§. 982. I may observe, that by the proper and prudent Use of the *dissolvent* ALIMENTS, no Pain will be excited; but Uneasinesses in the Kidneys, or Ureters, or Neck of the Bladder, may thereby be removed: No Fever will be brought on, nor symptomatick Fever increased by them, but febrile Symptoms may by them be either removed, or abated: No Strangury, nor Suppression of Urine will be produced by them,

them, but by them those terrible Events may be either prevented, or abated.

§ 983. The Cure of the STONE, and GOUT by Means of *suitable Aliment*, will be the most easy, the most pleasant, and safe, and, it may be, as sure, and as speedy, as by any other Means whatever.

§. 984. This leads me to consider, whether it is prudent to use any ALIMENTS, or MEDICINES, which are *strongly stimulating*, let their Denomination, or Title be what it will.

§. 985. It is certain, that by such *Aliments*, or *Medicines*, *Sand*, *Gravel*, and small *Calculi*, may be dislodged, and forced down the Ureters, and out of the Body with the Urine; and that in Cases where it so happens, Persons become free from their *nephritick* Complaints.

§. 986. Yet such a Method of Cure, in my Apprehension, is to be dreaded, and ought to be avoided, on the Account of other natural Effects of it.

§. 987. We can't certainly know the whole State of the *Kidneys*, or *Bladder* of any Person under *nephritick* Diseases; but we will suppose some Cases, one or other of  
of



of which is the Case of every Patient, *e.g.* either the *Kidneys* only have *calculous* Concretions, or the *Bladder* only, or both have them.

§. 988. If the KIDNEYS only have *calculous* Concretions, then the State of the Case will be one of these two, *viz.* either, 1. There are no more Stones in Number, and no larger in Bulk, than are capable of being, by a strong protrusive Force, propel'd from the Kidneys thro' the Ureters, into the Bladder. Or, 2. They are too many, or too large to be capable of passing thro' the Ureters.

§. 989. I don't suppose them to be so few, and small, as to pass easily through the Ureters; because in such Cases there is neither Danger, nor Pain; but in Cases attended with violent Pains in the Region of the Kidneys, or Ureters, we have Reason to apprehend there are *Calculi* so large, or so many, as cannot pass the Ureters without the Assistance of a violent protrusive Force, tho' they may be passable with it.

§. 990. Let us then consider, whether in the Case first supposed, (§. 988. N<sup>o</sup> 1.) it is prudent to give the Person any Thing

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(*Aliment*,

(*Aliment*, or *Medicine*) that is *strongly stimulating*. It appears to me very imprudent, because such Things are like to produce most exquisite and intense Pains ; Pains which may be attended with *Inflammation* of the Parts, that are the Seat of them, and which may bring on an acute *Fever*, that may terminate in the Death of the Patient.

§. 991. These Consequences (§. 990.) may happen, even where the Stone comes away ; and as we cannot be sure they will not, so the giving Things *strongly stimulating* will put the Life of the Person into a Hazard ; and on this Account ought to be avoided.

§. 992. 2. Supposing that there are in the KIDNEYS, *Stones* too many, or too large to be capable of passing thro' the Ureters ; if this is the Case, then giving any *Aliment*, or *Medicine* that is *strongly stimulating*, may (by making the Kidneys strongly to attract) force into the *Pelvis* of each Kidney, *Stones* too large to pass the Ureters ; or such a Quantity of Gravel, as is equally *unpassable* ; and thus bring on *Pains* intolerable, a *Suppression of Urine* irremoveable, and consequently inevitable *Death*.



§. 993. Now as we cannot be sure, that such Effects (§. 992.) will not follow, the giving Things *strongly stimulating* to Persons afflicted with the Stone, in my Opinion, ought never to be done.

§. 994. But *stimulating* Things are much more improper, if the *nephritick* Person is already under *violent Pains*, and has a *symptomack Fever* in Consequence of them; because they are the most sure Means to increase the Fever, and bring on Death, even tho' no Suppression of Urine should follow upon the taking them.

§. 995. From what has been observed, (§. 990, 992.) it appears, that terrible Effects may be brought on Persons afflicted with the STONE, by *Aliments*, or *Medicines*, strongly stimulating, *viz.* most exquisite PAINS, *Inflammation* of the Parts affected, a *Fever*, a *Suppression of Urine*, and a speedy *Death*; which are so many Arguments against the Use of them; and therefore Evidences of the Imprudence of advising them.

§. 996. That some Persons escape Death, and accidentally meet with a Cure by taking them, when the Stones are not too large,



nor too many to be expell'd, and pass'd out of the Body, will not, I think, justify an indiscriminate Exhibition of such Remedies; or the giving them, when we don't know the Bulk, or the Quantity of the Stones, or Gravel in the Kidneys.

§. 997. If Persons troubled with the Stone, thro' Impatience under their Pains, will, at all Adventures, without proper Advice, take Things strongly stimulating, they can only blame themselves, if the Event proves otherwise than they hope.

§. 998. Having shewn the Hazard of taking stimulating Things, whether *Aliments*, or *Medicines*, when *Calculi* are in the KIDNEYS, I shall now enquire, whether it is prudent to give them, when there is only a STONE in the BLADDER.

§. 999. Here it must be observed, that the *stimulating* THINGS, either, 1. Have not the Quality dissolvent of the *Stone*; or, 2. They have it.

§. 1000. 1. If they have no such Quality, (§. 999.) then the Effect of taking them in Relation to the Stone in the Bladder, can only be an Occasioning the Bladder, and Parts adjacent, strongly to contract, and  
press

press *undiquaque* the Superficies of the Stone, when the Bladder discharges its Urine.

§. 1001. Such Pressures (§. 1000.) frequently repeated, by frequently repeating the Doses of the stimulating Things, may occasion the Breaking of the exterior *Lamin* of the Stone into Pieces, if the Cohesion of its Parts is weak.

§. 1002. The same Effect (§. 1001.) may be produced by a Jolt in a Coach, by Jumping, and other Exercises, and Actions of the Body : Nay, I have known Persons, who without any such evident Cause, and without taking any Thing intentionally to dissolve, or break the Stone, have voided *Fragments*, or Pieces of a *calculous Lamin* : But a *Medicine*, that happens to break a *Calculus* in the Bladder, only by virtue of a stimulating Quality, is no more a Dissolvent of it, than a Hammer, that breaks it out of the Body.

§. 1003. The breaking a *STONE* in the Bladder, into *Fragments*, by any Means, is an Event, which, in my Opinion, ought, as much as possible, to be avoided ; because the Impulses of them against the Sphincter,



or Neck of the Bladder, as often as the Urine is voided ; and the passing of them out of the Body, will excite most intolerable *Pains*, and may *excoriate* the Parts they rub against in their Passage ; and also in Time produce an *Inflammation*, and *Ulcer*, in the Neck of the Bladder.

§. 1004. If I had a *STONE* in my *Bladder*, I should desire it might never be broken into Fragments ; nay, I would shun, as *Poison*, every Thing, whether *Aliment*, or *Medicine*, that was likely to break it : But I should wish to have it dissolved ; that is, the Cohesion of its Parts gradually destroy'd in the same easy Manner, in which the Dissolution of the *Calculus* was perform'd in every successful Experiment I made ; and then, as the Cohesion of the superficial Parts of the Stone shall happen to be destroy'd by a dissolvent Quality of my Urine, derived from suitable Aliment ; so the disunited Particles, exceedingly minute, will be continually washed off from the Stone, by the flowing Urine, and with it carried out of the Body.

§. 1005. Indeed from the Manner in which the *Calculi*, in my Experiments, dissolved,



solved, it seems reasonable to infer, that the proper and genuine Dissolution of the Stone will be perfectly easy, and undiscernable, except by an impalpable *Powder*, or *Sand* subsiding to the Bottom of the Urine in the Vessel, that receives it.

§. 1006. 2. If the stimulating *Aliments*, or *Medicines* have a Quality dissolvent of the Stone, then if they are given in such lesser Quantities, or Doses, as will not stimulate the Solids, and hurry on the Passing of Stones from the Kidneys into the Bladder, or of Fragments out of the Bladder, they may gradually in Time accomplish the Dissolution of it; but they ought not to be given in Quantities large enough to stimulate strongly the Solids, for the Reasons assigned, §. 1003. If there are *calculous* Concretions both in the *Kidneys*, and *Bladder*, (§. 987.) the Arguments against the Use of Things strongly stimulating are so much the stronger.

## C H A P. XVIII.

*Containing an Account of some Cases in which Persons have found great Relief against the Stone, and Recovery from nephritick Symptoms by Vegetables in common Use as Aliment, with proper Remarks.*

§. 1007. **I** Have in the Beginning of this *Treatise*, shewn by divers Reasons, the PROBABILITY of communicating to the Urine of Persons afflicted with the *Stone*, a Quality dissolvent of it, and of dissolving it by that Means : I shall now endeavour to evince that Probability by Experience ; that is, by the Advantage, which Persons afflicted with this Distemper, have obtained from Things in common Use as Aliment.

§. 1008. Dr. MORTIMER having, in Conversation, mentioned to me the Case of a Gentleman in *Kent*, who had found great  
Benefit

Benefit against the *Stone* by the *Juice* of ONIONS, I desired him to get me a particular Account of it.

§. 1009. He wrote accordingly to an Acquaintance and Neighbour of that Gentleman, and received the following Answer; which, with Dr. *Mortimer's* Leave, I transcribed, and is as follows.

*S I R,*

§. 1010. “ Your Queries I find grounded  
“ on a Supposition, that the [Gentleman]  
“ was cured of the *Stone*, whereas that was  
“ the Distemper that he died of.

§. 1011. “ He began to take *Onion Juice*  
“ by three Spoonfuls at a Time, and in-  
“ creased the Dose to Half a Pint *unmixed*,  
“ (but in what Time I cannot say) which  
“ he took every other Morning; in the in-  
“ termediate Mornings he took the same  
“ Quantity (I think) of *Camomile Tea*.

§. 1012.. “ GREEN TEA he drank a vast  
“ deal of, and in the Evening *Honey*, and  
“ *Water*. He tried what Effect the going  
“ beyond his Half Pint would have, but  
“ found that it over heated him.

§. 1013. “ He was troubled with the  
“ *Stone*



“ *Stone* in his Infancy, and cut for it while  
 “ a Boy ; but it gather’d again. — A vast  
 “ Quantity did he preserve of a *chalky* Sub-  
 “ stance he had voided : He has shewn me  
 “ several Boxes full, some like Pieces of  
 “ Shells ; but that Form (as I understood)  
 “ it had taken from the Vessel it had set-  
 “ tled in.

§. 1014. “ Besides his *Onion Juice*, and  
 “ Exercise, he used a strict *Regimen* of Diet ;  
 “ refraining from *Spices*, *Pickles*, and even  
 “ *Salt*, with his Meat, and seldom tasting  
 “ any strong, or fermented Liquor. TEA  
 “ was his chief Drink.

§. 1015. “ By these Means, (§. 1011, 1014.)  
 “ he so far got the *better* of his Distemper,  
 “ that I don’t remember him confined by  
 “ it three Days together in six or seven  
 “ Years : But still he was always sensible,  
 “ that he had a *Stone* in his Bladder, though  
 “ satisfied it was much diminished.

§. 1016. “ When he left off his *Onion*  
 “ *Juice*, I don’t know ; but a few Weeks  
 “ before his Death, he told my Wife — he  
 “ must come to it again.

§. 1017. Now as to this Case, (§. 1010,  
 &c.)

&c.) I would observe a few Things particularly.

§. 1018. *Obs.* 1. That this Gentleman found great Relief against the Stone by the *Juice* of *Onions*. This seems evident from §. 1015, 1016. He himself apprehended, that the Stone in his Bladder was much diminished by Means of it; and his Pains were so much abated, and removed, that in the Space of six, or seven Years, he had not been confined by his Distemper, more than three Days together.

§. 1019. *Obs.* 2. That he left off the Use of the *Onion Juice*: This may be concluded from his saying, “ he must come to it “ again.”

§. 1020. *Obs.* 3. That during his Disuse of that *Juice*, (§. 1019) the *Stone* in his *Bladder* was augmented in Bulk, and the painful Symptoms increased; which occasion'd him to say he *must come to it again*; and which is a Proof of the Advantage he had, while he was in the Use of *Onions*.

§. 1021. There cannot, I think, be a more convincing Evidence of the *Propriety*, and *Efficacy* of a Remedy, than to find the Distemper to abate, upon the taking it, and



to continue declining while used, and to have it revive and increase again, when it is laid aside.

§. 1022. The NARRATIVE mentions his taking the *Juice* of ONIONS, and taking it only every other Morning, (§. 1011.) and that if he exceeded his Half Pint, it over-heated him, §. 1012.

§. 1023. Here I may observe, that since by Experiments C, CI, compared with Experiment XCIX, it appears, that the Quality *dissolvent* of the *Stone* is more active in the MIXTURE of the *Juice* of Onions, and *Water*, and in the *Decoction* of them, than in the JUICE itself. It seems reasonable to think, that if this Gentleman had taken the *Juice* of ONIONS in less Quantity, and diluted with a sufficient Quantity of *Water*, and had taken a Draught of such a Mixture twice, or thrice every Day; or if instead either of the *Juice* by itself, or mixed with *Water*, he had drank six or eight Ounces of the *Decoction* daily, twice or thrice, he would have found much greater Benefit; and it may be have obtained a total Dissolution of the Stone.

§. 1024. I may add, that if he had used  
the



the *Decoctions* of ONIONS instead of the *Juice* unmixed, there is Reason to think he never would have found himself overheated, tho' he used it daily, in double the Quantity that he took of the *Juice* every other Day.

§. 1025. He refrained from *Spices*, and *Pickles*, and *Salt*, with his Meat, §. 1014.

§. 1026. *Obs.* 1. His Abstinence from *Aromatics* was right, if his Constitution was sanguine, the Fibres of his Vessels sufficiently tense, and his Pulse sufficiently strong; but if otherwise, he denied himself what might have proved very beneficial to him.

§. 1027. *Obs.* 2. The *Vinegar* used with *Pickles* has a Quality dissolvent of the Stone; and so have Cucumbers, and therefore forbearing the Use of them, on the Account of his Distemper, was entirely needless.

§. 1028. *Obs.* 3. The *Sea Salt* not being of an *alkaline* Nature, but containing an *acid Spirit* separable from it, there was no Occasion to forbear a moderate Use of it with his animal Food.

§. 1029. *Obs.* 4. I may further observe, that since it appears by my Experiments,  
that

that many Liquors made by Fermentation, have a Quality dissolvent of the Stone, his Abstinence from such Liquors on the Account of his Distemper, was unnecessary: But his drinking *Honey* with *Water* in the Evening, I believe was of great Service to him, on the Account that it has somewhat of the *dissolvent* Quality; (*vid.* Experiment XXXVI.) and the GREEN TEA, had it been made by a sufficient *Decoction*, might have proved as useful as his *Onion Juice*. *Vid.* Experiment CC.

§. 1030. As the *Juice* of ONIONS was very beneficial to the Gentleman, whose Case we have consider'd, so the *Decoction* of *Onions* has been efficacious for the Relief of others.

§. 1031. The last Summer I was in Company with a Gentlewoman of my Acquaintance, when the *Distemper* of the *Stone* happen'd to be a Subject of the Conversation; on which Occasion she related the Case of a Boy, that had been miserably tormented with it, but cured by *Onion-Water*.

§. 1032. Reflecting on that Conversation, §. 1031, and apprehending some Facts she mentioned,



mentioned, very pertinent to this Subject, I wrote to her desiring an Account of what she knew of the Effects of *Onion-Water*, and received the following Answer.

*S I R,*

§. 1033. “ The Child I mention’d, lived  
“ at *Norwich*; he was about nine Year’s  
“ old: I did not know him, but was told  
“ he was intended to be cut for the Stone.

§. 1034. “ The *ONION-WATER* is to be  
“ made of the same Strength it is of, when  
“ thrown away after boiling *Onions* for  
“ Sauce.

§. 1035. “ I have advised several People  
“ to drink a Quarter of a Pint of it twice  
“ a Day, and they have found Relief.

§. 1036. “ My eldest Brother’s Daughter  
“ drank it six Months, and had very little,  
“ or no Complaint after. Her Case was  
“ *Gravel*; but no other Medicine gave her  
“ Ease.

*I am, Sir, &c.*

§. 1037. As to the Case of the Boy at *Norwich*, §. 1033, supposing it uncertain, whether the Stone, which had so miserably tormented



tormented him, was totally dissolved, or not; yet that *Removal* of the Symptoms occasion'd by it, which induced his Friends to think him cured, is, to me, an Evidence that the Stone was at least greatly diminish'd by his drinking daily of the *Decoction* of ONIONS; and an Argument that it might, in him, be entirely dissolved by this Liquor, if drank in sufficient Quantity; and the daily Use of it continued a sufficient Time.

§. 1038. That several other Persons found Relief by the same Remedy, (§. 1034.) is, in my Opinion, a Proof, that a Quality *dissolvent* of the Stone, was thereby communicated to the Urine of those Patients; and, by Means thereof, a great Diminution of the Bulk of those calculous Concretions, which produced the Symptoms they complain'd of, if not a total Dissolution of them.

§. 1039. For there seems to be only two rational Ways of relieving Persons troubled with the *Stone*, or *Gravel*, viz. 1. The lessening the Bulk or Quantity of the calculous Matter, that made the painful Pressure against the Parts affected: Or, 2. relaxing the Fibres of the Vessels affected, which will make the Vessels more dilatable, and

and in some Proportion render the Pressure of the *Stone*, or *Gravel* less against the Parts affected, and thereby mitigate, if not remove the nephritick Symptoms.

§. 1040. MUCILAGINOUS, and *oily* Things relieve Persons this latter Way ; but the *Decoction* of *Onions* being neither a mucilaginous, nor an oily Liquor, we have Reason to apprehend, that where it gives Relief, it does so by diminishing the Bulk, or Quantity of the calcalous Concretions ; that is, by *dissolving* them.

§. 1041. From the Effect of taking the *Decoction* of *Onions* in Cases of the *Stone*, or *Gravel*, it appears reasonable to infer, that the *Decoction* of LEEKS, and other Dissolvents of the Stone, which by Experiments have discover'd a stronger dissolvent Quality than is in the *Decoction* of ONIONS, may more effectually accomplish a total Dissolution of it, whether in the *Kidneys*, or *Bladder* ; and I think it may be added, that the Relief obtained by Means of the *Onion-Water*, (§. 1033, *ad* 1036) establishes the Probability of curing the Stone by Aliment.

§. 1042. I shall now consider the Advantages, which some Persons, afflicted with



the *Stone*, or *Gravel*, have obtained by Means of BREAD, one of the most common Sorts of Aliment.

§. 1043. Having been inform'd that Mr. GIBBONS, of *Lincoln's Inn Square*, found great Benefit by eating some *Bread every Morning fasting*, I waited on him, when he gave me the following Account of his Case, with Leave to publish it for the Good of Mankind.

§. 1044. “ I was for several Years afflicted with a *Stiffness*, and *Pain* in my *Loins* ; and sometimes to that Degree, that I could not set down, or rise, without much *Uneasiness*, and *Difficulty* ; and after taking, at different Times, several Medicines to little Purpose, I was advised to take *one Mouthful of dry Bread in a Morning fasting, and to chew it till very moist, and then swallow it* ; and was told, many Persons had found great Benefit by so doing, in Cases of the *Stone*, as well as *Gravel*.

§. 1045. “ This (§. 1044.) I thought to be so trifling a Thing, that for some Time I neglected it, as not thinking it could  
“ be



“ be of any Benefit ; but my *Pain* and *Stiff-*  
 “ *ness* continuing, I was a second Time  
 “ advised by another Person to the same  
 “ Remedy : And then I determin’d to try  
 “ the Experiment, knowing it was not pos-  
 “ sible for it to do me any Harm, if it did  
 “ no Good.

§. 1046. “ And after using it about a  
 “ Week, or ten Days, (as I remember the  
 “ Time) all my Complaints ceased ; and I  
 “ grew perfect well.

§. 1047. “ Since, I have had some slight  
 “ Returns, and on using the same Remedy  
 “ it generally goes off ; but I have never  
 “ been so bad since, as I was before I used  
 “ this Remedy. I began to make use of  
 “ this Remedy about *Michaelmas* 1737.

*April* 20, 1739.

W. GIBBONS.

P. S. “ After taking this Medicine, I  
 “ voided considerable Quantities of *Gravel*.

§. 1048. Mr. GIBBONS likewise inform’d  
 me, that Mr. EDWARD HEYLYN, a Gentle-  
 man, who formerly lived at *Bristol*, but  
 now in *Lemon-street, Goodman’s Fields*,  
 could give me a large Account of the Benefit

of using the Remedy, which so much relieved him.

§. 1049. I therefore waited on that Gentleman, who very freely acquainted me with many Particulars, and told me, that he knew many Persons in, and about the City of *Bristol*, that had been much afflicted, some of them for many Years, with Symptoms of the *Stone*, or *Gravel*, in the *Kidneys*, or *Bladder*; grievously tormented with *Pains*, who were presently relieved by the Remedy of *eating one Mouthful of dry Bread fasting every Morning*; and in a short Time freed from their Complaints; and remain'd so, except that some of them at distant Times had some Returns, which were removed by using again the same Remedy.

§. 1050. This Account (§. 1049.) I publish with Mr. *Heylyn's* Leave.

§. 1051. It appears from every Experiment I made with BREAD, that it has a Quality *dissolvent* of the *Stone*; and consequently, that eating Bread is a proper Remedy for Persons afflicted with this Distemper.

§. 1052. And since the Eating so small

a Quantity as *one* Mouthful of dry Bread every Morning fasting, has proved so very advantageous as hath been related, it seems reasonable to think, that eating two, or three, or four Mouthfuls of Bread instead of one, will be more beneficial.

§. 1053. From what has been observed concerning the Nature of BREAD, we may well conclude, that they act prudently, who eat a great deal of it with their *animal Food*; because that which does so much towards the Dissolving the Stone, must contribute to prevent that Increase of it; which might otherwise be occasion'd by the animal Food.

§. 1054. For the same Reason, (§. 1053.) the Eating plentifully of Bread may be of great Service to Persons afflicted with the *Gout*. I will only add, that the Benefit, which Persons afflicted with the Stone, have had from the eating Bread, is another Evidence of the Probability of curing this Distemper by suitable Aliment.



## C H A P. XIX.

*Containing divers Considerations,  
shewing the Probability of curing  
the Gout, as well as the Stone, by  
suitable Aliment.*

§. 2055. **I** Think it may not be amiss, before I lay down Rules of Diet conducive to the Dissolution of STONES either in the *Kidneys*, or *Bladder*, to shew the PROBABILITY of curing the GOUT, as well as the *Stone*, by suitable Aliment.

§. 2056. That this Point may be in a clear and just Light, what has been before taken Notice of, (§.27,28. *Prop.* 3.) should be kept in Remembrance, *viz.* That both the *Gout* and *Stone* proceed very much from the same Causes; and that both the *Calculus*, and the *gouty Humour* have the same Sorts of component Parts, tho' in different Proportions of one to the other, and tho' the gouty Humour has commonly a Proportion of Lymph, which the *Calculus* has not; and tho' the gouty Concretions, which hap-  
pen

pen at the Joints, be not so compact, or their Parts so closely united as those of the *Calculus* ; yet both these Sorts of Concretes consist of alkaline *Salts, Air, Oil, and Earth.*

§. 1057. The Experiments of Mr. *Boyle*, Dr. *Grew*, Dr. *Stare*, and Dr. *Hales*, prove this Account, as to the constituent Parts of the human *Calculus* ; and the Experiments of *Sign. M. Pinelli* confirm it as to gouty Concretions ; for he found by Tryals, that distilled *Vinegar, Spirit of Vitriol, and Spirit of Salt*, which are ACIDS, will dissolve the *tophaceous* Matter found about the Joints of Persons afflicted with the *Gout* ; and that neither Spirit of *Sal Armoniac*, nor Spirit of *Hartsborn*, nor Spirit of *Urine*, which are *Alkalies*, could dissolve it. Whence it may be concluded, that the gouty Concretes and Humours are not of an acid, but of an alkaline Nature.

§. 1058. *S. M. Pinelli* likewise tells us, that he put about three Ounces of the *tophaceous* Matter into a Retort, and distilled it according to the Rules of Art, and that he obtain'd a Spirit (which he found to be a perfect volatile *Alkali*) with some few

Drops of *Oil*, and about two Drachms of a *Caput mortuum*. (*Vid. Philos. Trans. abridg'd*, Vol. 7. Part 3. Page 634, 635.

§. 1059. From what has been observed, (§. 1057, 1058.) it appears that the *gouty Matter* consists of alkaline *Salts*, *Oil*, and *Earth*.

§. 1060. I may add *Particles* of *Air*, as another Sort of the constituent Parts of the *gouty Matter*, because, as they are some of the component Parts of the *Calculus*, (tho' not so plainly discover'd by the common Operations of the Chymists, as by the Experiments of Dr. *Hales*) it seems reasonable to infer, that they are some of the constituent Parts of *gouty Concretes*, which are Substances commonly less compact than the Stones in the Kidneys, and Bladder.

§. 1061. Therefore since the *Gout* depends so much on the same Causes, which produce the *Stone*; and since the component Parts of *gouty Concretions*, and of the *Stone*, are so much the same specifically; I apprehend it is a very rational Conclusion, that those Things, which can be effectual to dissolve the *Stone* in the *Kidneys*, or *Bladder*, may likewise alter the  
Quality



Quality of the *gouty* Humour, dissolve the Particles of it into lesser, and lesser, and render them minute enough to pass easily out of the Body thro' any of the excretory Ducts.

§. 1062. I grant that these Distempers, (§. 1061.) may be *hereditary*; that some Persons may derive the Gout from their Parents; and that some Children may be afflicted with the Stone before they have tasted Wine, or enter'd on the Use of animal Food. But what is the proper Conclusion from such Cases? Not that they are incurable; tho' it may be, they are attended with greater Difficulty, or require a longer Time for their Cure.

§. 1063. We may indeed infer from them, (§. 1062.) that such Persons have derived from their Parents a Blood wherein the *alkaline Salts* are too abundant, which have an *assimilating* Quality, by Means of which, in Length of Time, they multiply, and somehow unite with Particles of *Air, Oil, and Earth*, and so produce the *Gout, or Stone*, or both, or some other Distemper.

§. 1064. It may seem a *mysterious* Thing, this, *viz.* That one Sort of Substances  
should

should have a Power of assimilating, or *transmuting* others into their own Nature, and endowed with their own specifick, and distinguishing Properties; and it is a MYSTERY, which no Philosophy has been able, hitherto, to explain.

§. 1065. But tho' this Fact (§. 1064.) is inexplicable, yet the Truth of it is most evident. The Vegetation of Plants and Trees proves this. How is it that an *Acorn* (weighing not one Drachm) set in the Earth, grows to be a Tree, and it may be a Tree of one or two Ton, or more, in Weight, if the Matter imbibed, if I may so express it, by the Roots, and Branches, was not in great Part united to it, and transmuted into the Nature of it? How comes it to pass, that the many different Species of Trees, and Plants, growing in one and the same Wood, where the Soil of it is the same throughout, do increase in Bulk, each Species retaining its own specifick Properties, if each Species had not an assimilating Power, transmuting what it receives from the common Earth, into its own Nature, possessed with its own specifick Qualities?

§. 1066. The like Queries may be put in  
reference



reference to animal Substances: As, how it is that young *Deer, Calves, and Lambs*, living in the same Park, and feeding on the same *Grass, and Hay*, come to increase in Bulk to the Stature of their Dams, and to have their Flesh of different Colours, and Tastes, according to the peculiar Nature of each Species, if, in each Sort of these living Substances, there was not an assimilating Power, transmuting what they eat of the same Aliment into their own Nature, or Substance, endowed with their own specific Properties.

§. 1067. But whether the *STONE*, and *GOUT* be *hereditary*, or not; and whatever be the antecedent, and remote Causes of them, yet the *proximate* Causes are *alkaline Salts, Air, Oil, and Earth* uniting, and combining together to the Formation of larger Particles, which produce Uneasiness in one Part of the Body, or other.

§. 1068. Therefore, if those constituent Parts of the *Stone, and Gout*, (naturally existing in the Blood) can be kept from running together, and uniting; and can also be sufficiently evacuated from the Body; then may Persons, who are free from these Distempers,



Distempers, be, by such Means, preserved from them.

§. 1069. And if there are Aliments, which can *dissolve* the Union, which may have happen'd between the animal *alkaline Salts Air, Oil, and Earth*, to the Production of either of the Diseases under our Consideration, then there is Reason to hope these Diseases may be removed, or cured by them.

§. 1070. The Experiments I have made, and which have been related, prove that many Sorts of Things in common Use, as ALIMENT, are endowed with a *dissolvent* Quality able to destroy the Cohesion of the component Parts of the *Calculus*.

§. 1071. And it is a reasonable Expectation, that those Aliments, which can dissolve the Stone formed either in the Kidneys, or Bladder, may also destroy those weaker Cohesions of animal *Salts, Air, Oil, and Earth*, in the Blood, which constitute the *gouty Humour*; and consequently free gouty Persons from their Disease.

§. 1072. If the Quantity of *alkaline Salts* in the animal Fluids be sufficiently diminished; if the Blood be freed from all morbid

bid *Viscidities*; and if the Action of the Heart, and Arteries is preserved in due Strength; and if the superfluous Parts of the animal *Salts, Oil, and Earth*, be duly attenuated, and excreted from the Body, it does not seem to me possible for a Fit of the *Gout* to happen.

§. 1073. And as there is a great Probability that these several Particulars (§. 1072.) may be accomplish'd by *suitable Aliment*; or, as there are several Sorts of Aliment, which may prove effectual to these Purposes, so there is great *Probability*, that by a steadfast Perseverance in a due Observance of proper Rules of Diet, Persons may become not only free from the *Stone*, but also from the Humour of the *Gout*; and consequently secured from the Return of its painful Paroxysms.

§. 1074. I have still another Argument very pertinent to this Subject, which is the great Benefit that some Persons, who for several Years were grievously afflicted with the *Gout*, have found only by living on a *vegetable Diet*, tho' they did so without any *Discrimination* of the Sorts of vegetable Aliment; for not knowing which Sorts of  
them



them have the QUALITY capable of *altering*, and *destroying* the *gouty Humour*, they did promiscuously eat of all ; of those which were improper, or insignificant, as well as those which had a Quality conducive to their Recovery.

§. 1075. It appears therefore more rational for Persons to expect Freedom from the GOUT by Means of *Aliment*, since by EXPERIMENTS it is discover'd, which Sorts of it have that Medicinal Virtue, which their Disease stands in need of.

§. 1076. All that remains requisite for establishing the pleasing Opinion I have suggested, is to relate some Cases, which shew the Efficacy of vegetable Aliment for curing this painful, and crippling Distemper.

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## C H A P. XX.

*Containing Accounts of Cases, which clearly prove the Probability of curing the Gout by suitable Aliment ; with some proper Remarks.*

§. 1077. **I** Shall in the next Place evince, by the EXPERIENCE of Persons, that have been afflicted with the *Gout*, the great *Probability* of curing it by proper *Aliment*. The first Case I shall consider, is that of the Reverend Mr. THOMAS SLEIGH, of *Highgate*, who favour'd me with an Account of it in the following Letter.

## C A S E I.

S I R,

‘ As you desired to know the Steps I  
 ‘ took in order to throw off that cruel and  
 ‘ painful Distemper of the *Gout*, be pleased  
 ‘ to take it in the Manner following.

§. 1078. ‘ The *Gout* began to grow up-  
 on

‘ on me very much, and confined me, and  
 ‘ render’d me uselefs for *ten*, or *twelve*  
 ‘ Weeks in the Year.

§. 1079. ‘ I thought it was high Time to  
 ‘ look about me, that the future Part of  
 ‘ my Life might not be wholly uselefs, if  
 ‘ any Remedy could be found to give me  
 ‘ Ease.

§. 1080. ‘ The last FITT that I had, held  
 ‘ me three Months ; and all that Time, as  
 ‘ it was usual with me upon the same Oc-  
 ‘ casion, I never eat any *animal Food*, or  
 ‘ drank any *Wine* ; so that you will observe,  
 ‘ that I was got three Months on my Way  
 ‘ towards a Cure.

§. 1081. ‘ After this I pursued the same  
 ‘ Method of the *vegetable Food* for two  
 ‘ Years and a Half.

§. 1082. ‘ I cannot but say it gave me a  
 ‘ *Shock* at the first ; it brought down very  
 ‘ much the Bulk of my Body, and for two  
 ‘ Months, at least, it hinder’d my Sleep till  
 ‘ Two or Three o’Clock in the Morning.  
 ‘ Several of my Friends observing these  
 ‘ Effects, would have perswaded me to re-  
 ‘ turn to my former Way of living, and told  
 ‘ me dreadful Stories of the Effects of the  
 ‘ Method

‘ Method I was in ; particularly, that the  
‘ Moment the GOUT return’d, it would shoot  
‘ me thro’ the Head.

§. 1083. ‘ I weather’d all these Attacks,  
‘ and pursued my Way with Courage, Con-  
‘ stancy, and Perseverance all the Time, I  
‘ have told you above ; because every Month  
‘ I found the salutary Effect of this *Regi-*  
‘ *men*.

§. 1084. ‘ All Sorts of VEGETABLES *pro-*  
‘ *miscuously*, and without Distinction, were  
‘ my Food ; *Carrots, Turnips, Cabbage,*  
‘ *Savoys, Brocoli, Parsnips*, together with  
‘ all Sorts of *Puddings, Apple Pyes, Ap-*  
‘ *ple Puddings*, with as much Variety as the  
‘ Cook could invent.

§. 1085. ‘ By this Method I gradually  
‘ found, that the morbidick Matter was bro-  
‘ ken, and destroy’d.

§. 1086. ‘ And as the plainest Evidence  
‘ of its Effect, I must tell you, that before  
‘ I used this *Regimen*, the Point of my *left*  
‘ *Elbow* was *petrified* to the Bigness of a  
‘ Pidgeon’s Egg, which insensibly wore away,  
‘ and is no more.

§. 1087. ‘ At the End of two Years and  
‘ a half, I had a very strange Shock of a



‘ *Vertigo*, which continued thirty Hours  
 ‘ with continual *Reachings* to vomit. From  
 ‘ what this arose, I will not absolutely de-  
 ‘ termine ; but I believe it was from *eat-*  
 ‘ *ing*, or *drinking* what was greatly disagree-  
 ‘ able. From that Moment I was advised  
 ‘ to Alteration, and have eat the *white*  
 ‘ *Meats* ; but withal continuing, as Op-  
 ‘ portunity serves, to the *vegetable Diet*.  
 ‘ By this Method, and the Blessing of God  
 ‘ upon my Endeavours, I have *continued*  
 ‘ *free from that painful Distemper* ; and  
 ‘ am fully persuaded it will be an effectual  
 ‘ Cure, when it is strictly kept to.

§. 1088. ‘ I should have told you, that my  
 ‘ chief Liquor all the while was *Pearl*  
 ‘ *Barley-water*, and *Milk*.

§. 1089. ‘ I had Dr. *Boerhaave*’s Opinion  
 ‘ by me, which tells me, that if a Person  
 ‘ observed this METHOD for *one whole Year*,  
 ‘ he would answer for it, that the Party  
 ‘ might return again to his usual Food with  
 ‘ Moderation, without any bad Effect ; and  
 ‘ I knowing, that I had perform’d my Qua-  
 ‘ rantine above double his allotted Time  
 ‘ for a Cure, I thought I might fall into the  
 ‘ *white*

‘ *white Meats*, which I have continued in a  
‘ Year and a half.

§. 1090. ‘ These, *Sir*, are the general  
‘ Hints of my Conduct in the Affair of the  
‘ GOUT : I sincerely, and heartily wish you  
‘ Success in relieving the Ills and Pains, (that  
‘ noble Design) upon your Fellow Crea-  
‘ tures, and that the Direction and Blessing  
‘ of God may crown all your Labours. I  
‘ am, *Dear Sir*, with great Esteem,

*Your obliged Friend,*

*Feb. 7,*

*and humble Servant,*

1738-9.

THO. SLEIGH.

§. 1091. I received a second Letter from this Gentleman, dated *March 23*, 1738-9, giving me an Account of a Return of his GOUT ; that on the 12th of *February* last, after riding about ten Miles, he found a *Pain* in his left *Hand*, and *Wrist*, and in one Night up to the Point of his *Elbow* ; and that in four Days after, the Gout seized both his *Feet* ; and that the *Pains* continued very violent seven Days, and Nights.

§. 1092. There are divers Things remarkable in the Case of the Reverend Mr. *Sleigh* ; particularly, 1. That the Gout increased so

much upon him, as to confine, and render him 'useless *ten, or twelve Weeks* in the Year, (§. 1078.)

§. 1093. This State of Things, (§. 1092.) with the melancholly Prospect of growing worse every Year, determin'd him to abstain from all *animal Food, Wine*, and all other spirituous Liquors, and to live only on a *vegetable Diet*.

§. 1094. 2. That he used the *vegetable Diet* two Years and a half, (§. 1081.) All which Time he remain'd entirely free from the Gout, tho' he eat of all Sorts of vegetable Aliments *promiscuously*.

§. 1095. Now this Freedom from the GOUT, while he kept strictly to the vegetable Diet, is, in my Apprehension, an Argument that it may be cured by *suitable Aliment*; and to me it seems a plain Instance of it.

§. 1095. 3. That the *gouty TUMOUR*, which had been form'd on the Point of his left Elbow to the Bigness of a Pidgeon's Egg, *insensibly wore away*, while he was in the Use of the vegetable Diet; that is, it was gradually *dissolved*, and its component Particles dissipated.

§. 1096.



§. 1096. We may from this Event, (§. 1095.) and his Freedom from the Gout, very reasonably infer the following *Corollaries*, viz.

*Coroll. 1.* That by Means of some of the Sorts of VEGETABLES he lived upon, the *gouty Humour* was altered ; its Quality, or Nature destroy'd ; and further Supplies of *tophaceous* Matter to the affected Elbow prevented ; and, therefore, that there are some *vegetable* ALIMENTS by which Persons may be cured of the Gout, which confirms the foregoing Evidence, §. 1095.

*Coroll. 2.* That, very probably, (after he had been some Time in the Use of the *vegetable Diet*) Particles of a *dissolvent* Nature were excreted from the Blood, and propel'd, thro' the Extremities of lymphatick Arteries, and from the Glands near adjacent, to the *gouty Concrete* on the Point of his left Elbow, (instead of the Particles of *tophaceous* Matter, which used to be excreted by them) and impel'd into that Concrete, and by little, and little, dissolved the Cohesion of its Parts, and propelled the dissolved Atoms thro' the adjacent Pores from their Lodgment, and out of the Body ; and

thus, or in such-like Manner wore away that Tumour, (§. 1086.)

*Coroll.* 3. That it is very probable various other TUMOURS may be dissolved, and gradually dissipated by Means of suitable Aliment; which deserves Consideration.

§. 1097. It may be proper for me here to mention, that this Gentleman did eat a great deal of Fruit; Fruit of all Kinds in their Seasons; especially *Apples*, as he inform'd me; which, I apprehend, contributed much to the Diminution of the Quantity of *alkaline Salts* in his Blood, and to the Production of a *dissolvent* Quality in the Humours excreted from it; and that by this Means, with the Assistance of some other Sorts of Vegetables he fed upon, he became free from the Disease, which had given him so much Torment, and Confinement.

§. 1098. But I must observe, that after he had been a Year, and a half in the Use of *animal Food* again, his Gout return'd upon him.

§. 1099. In his second Letter, giving an Account of the Return of his Gout, he writes: ' The Food I have allowed myself  
' has been *Veal, Fowls, Fish*, not forget-  
' ting



‘ ting a great deal of *Vegetables*. I never  
 ‘ drink any *Cyder*, or *Wine* ; only as I  
 ‘ brew very good *Small BEER*, I usually  
 ‘ drink a Pint of it at Dinner, and no more.  
 ‘ As to the Quantity of Meat I eat at Din-  
 ‘ ner, I believe it may be *twelve Ounces*,  
 ‘ besides *Bread*, and other *Vegetables*. Ri-  
 ‘ ding gives me a strong Appetite ; but then  
 ‘ I eat no Supper.

§. 1100. From what has been related,  
 (§. 1098, 1099.) divers Things appear evi-  
 dent. *E. g.*

1. That the Gout may be produced without  
 drinking any *Cyder*, or *Wine*. (*vid.* §. 1099.)

2. That eating daily of *animal Food*, tho’  
 it be only at Dinner, may produce the  
 GOUT. It did so in the Case of this Gen-  
 tleman, which is an undeniable Proof of  
 it, §. 1091, 1099.

§. 1101. It is observable, that this Gentle-  
 man, by Means of living two Years and a  
 half on the vegetable Diet, enjoyed, *four*  
*Years* a Freedom from his painful Distem-  
 per ; it being a Year and half after his Re-  
 turn to animal Food, before he had a Re-  
 turn of his Gout ; and if he had eaten but  
*six Ounces* of animal Food at Dinner, in-



stead of twelve, it seems probable that he might have remain'd free from it, at least another Year and a half.

§. 1102. There is one Particular more in his Case deserving Notice, *viz.* That his leaving off *animal Food, Wine*, and all spirituous Liquors at once, not by Degrees, and going entirely into the *vegetable Diet*, gave him a great Shock at the first, and brought down the Bulk of his Body ; (§. 1082.) which is, in my Apprehension, an Argument that vegetable Aliment alone is not so nourishing, and strengthening, as when mixed with animal Food ; and that in some Cases *animal Food* is not only proper, but very needful.

## C A S E II.

*The Reverend Mr. JOSEPH DENHAM's Account of his Gout, and of the Advantages he found by a vegetable Diet, in a Letter to the Author.*

*S I R,*

§. 1103. ‘ If the History of my Gout  
‘ will be of any Service to your Design, the  
‘ following is the most exact I can give of it.

§. 1104. ‘ I was first seized in *December*  
‘ 1715, and for *ten Years* had it (§. 1103) very  
‘ regularly, twice in the Year. The Violence  
‘ of

‘ of the *Pain* usually continued about four  
‘ Days ; and I was upon my Legs, and abroad  
‘ in fourteen.

§. 1105. ‘ The next *seven Years* it was  
‘ very *irregular*, of much longer Conti-  
‘ nuance, and more painful ; and in the  
‘ last four of them, I was seldom free from  
‘ *flying Pains* about me, when I was not  
‘ confined.

§. 1106. ‘ The Manner in which I lived  
‘ during this Period, (§. 1104.) was eating  
‘ *Flesh* ; and I preferred that of the strongest  
‘ Class at *Dinner*, and generally at *Supper* :  
‘ I drank *Wine*, but principally *Malt Li-*  
‘ *quors*, and *Cyder*.

§. 1107. ‘ I had a good Appetite, and Di-  
‘ gestion, enjoy’d in other Respects a good  
‘ State of Health, and slept well : But here  
‘ I must observe, that usually after my Meals  
‘ I found a sensible *Fullness*, and a Disposi-  
‘ tion to sleep.

§. 1108. ‘ Being thus fatigued for these  
‘ last seven Years with painful and tedious  
‘ Confinements, I determined to enter upon  
‘ a *Milk*, and *vegetable Diet*, which I be-  
‘ gan in *August* 1732, and continued with  
‘ a good Degree of Regularity, for *five*  
‘ Years.

§. 1109. ‘ In the *July* before I had a very  
 ‘ severe Fit, and another Fit in the *October*  
 ‘ following ; and in the next *January* I was  
 ‘ seized with a *violent Pain* in my *Breast*  
 ‘ with a *Hoarseness*.

§. 1110. ‘ This Disorder, (§. 1109.) con-  
 ‘ tinued near three Months, tho’ I took a  
 ‘ Variety of *Medicines* by the Doctor’s Or-  
 ‘ der ; when almost despairing of Relief,  
 ‘ and repenting my Change of Diet, I re-  
 ‘ solved to try what distilled *Quicksilver*  
 ‘ would do for me ; of which I took three  
 ‘ Quarters of an Ounce Morning and After-  
 ‘ noon ; and in six Days my Disorder went  
 ‘ off.

§. 1111. ‘ During this Period of *five Years*  
 ‘ in the *vegetable Diet*, I had three *slight*,  
 ‘ and *short* Fits, and no more, as I can re-  
 ‘ member. The Pains, which I almost al-  
 ‘ ways had before, went off ; no sensible  
 ‘ Fullness, nor prevailing Disposition to  
 ‘ sleep after Meals ; no Faintness of Spirits,  
 ‘ nor Loss of Flesh. I slept easy, and much  
 ‘ refreshed with it : The only Difference I  
 ‘ found was, that if I engaged in any la-  
 ‘ borious bodily Exercise, I was very apt to  
 ‘ sweat,



‘ *sweat*, and my Spirits would not hold out  
‘ so long as usual.

§. 1112. ‘ The last Year I ventured to eat  
‘ some *Flesh Meat*, but drank no *Wine*, nor  
‘ any *Malt Liquor*.

§. 1113. ‘ I began with the *white Meats*,  
‘ and sometimes gratified my Appetite with  
‘ those of the strongest, and coarser Kinds ;  
‘ hoping the five Years Abstinence had made  
‘ such an Alteration, that this Indulgence  
‘ would have done me no Harm.

§. 1114. ‘ I also drank CYDER, perhaps  
‘ four Gallons in three Months ; but I have  
‘ since found, by the Return of the GOUT  
‘ last *September*, and a fresh Attack in *De-*  
‘ *cember* last, the crippling Effects of which  
‘ are still upon me, that I am to expect no  
‘ certain Relief, but from the *Milk*, and  
‘ *vegetable Diet* ; and I am determin’d to  
‘ add to it a regular Course of riding on  
‘ Horseback.

§. 1115. ‘ Pardon me, *Sir*, that I have  
‘ delay’d this Account longer than I should  
‘ have done ; it was owing entirely to ma-  
‘ ny unforeseen Accidents. I heartily wish  
‘ you

‘ you Direction and Success in your Pursuits  
 ‘ for the Good of Mankind.

I am,

*Lemon-street,*

*Feb. 28,*

*1738-9.*

*Dear Sir,*

Your most obliged

humble Servant,

JOSEPH DENHAM.

§. 1116. *P. S.* ‘ I eat all Sorts of Sum-  
 ‘ mer *Fruits*, especially *Apples* ; and all  
 ‘ Sorts of VEGETABLES, *viz. Carrots, Cab-*  
 ‘ *bage, Turnips, Asparagus, Potatoes,*  
 ‘ *Pease, Beans*, and every other Sort in its  
 ‘ Season. My usual DRINK was *Water*,  
 ‘ and often mixed with *Milk*.

§. 1117. There are several Particu-  
 lars deserving Notice in the Case of the  
 Reverend Mr. *Denham* : I shall remark some  
 of those, which relate to the Point I am  
 upon.

§. 1118. 1. It must be observed how long  
 this Gentleman had been afflicted with the  
 GOUT, before he enter’d on a vegetable Diet,  
*viz. seventeen Years*, §. 1104, 1108.

§. 1119. 2. That the Distemper was very  
*regular thro’ the first ten Years*, returning  
 twice in the Year, (§. 1104.)

§. 1120.

§. 1120. 3. That the next *seven* Years the GOUT was very *irregular*, the Fits of it of much longer Continuance, and more painful than they used to be in the preceding Years, (§. 1105.).

§. 1121. 4. That in the last four Years of those seven, (§. 1105.) he was seldom free from *flying Pains* about him, even in the Intervals, between the Returns of his Gout, when he was not confined by it, (§. 1105.)

§. 1122. Whence it appears, that the Distemper was making a dreadful Progress, and the gouty Humour increasing in a frightful Manner.

§. 1123. This melancholy State of Things, and the having been fatigued for seven Years with painful, and tedious Confinements, determin'd him to enter on a *Milk*, and *vegetable* Diet, §. 1108.

§. 1124. He livid on such ALIMENT pretty regularly for *five* Years together, and very remarkable is the happy Alteration which he obtained by so doing; which leads me to observe,

§. 1125. 5. That thro' the Course of these *five* Years, he don't remember that  
he



he had more than *three slight and short Fits* of the Gout, tho' he lived on all Sorts of Vegetables *promiscuously*. This Fact, I think, is another solid Argument proving the PROBABILITY of curing the Gout by suitable Aliment.

§. 1126. This Gentleman acquaints us further, that the last Year he return'd to the Use of Flesh Meats chiefly of the white Sorts; but drank *no Wine*, nor any *Malt Liquor*; only drank some *Cyder*, to about the Quantity of four Gallons in three Months; which amounts to about six Ounces a Day, one Day with another.

§. 1127. And he further informs us, that he had a Return of his *Gout* the last *September*, and another Attack of it in *December* last; the crippling Effects of which, he says, are still upon him.

§. 1128. From this State of Things we may well infer the following Particulars, *viz.*

*Corollary 1.* That the Gout may be produced without drinking any *Wine*, or *Malt Liquor*. The Fact related proves this, being an Instance of it.

*Corollary 2.* That the Return of his  
Gout

Gout must have been occasioned either by the *animal Food*, which he eat, or by the *Cyder* he drank.

§. 1129. I apprehend the Gout could not be again produced in him by the *Cyder* he drank; because CYDER contains only *one Sort* of the Particles constituent of the gouty Humour, *viz.* those of *Air*, which also abound in most vegetable Substances, especially in *Apples*; from which, neither of the Gentlemen, whose Cases have been related, ever found any Inconvenience. I grant that in Persons full of *gouty* Humours, a Fit of the Distemper may be brought on by drinking *Cyder*; but in such a Case, it produces that Event not by increasing the Quantity of the gouty Matter, but by thinning the animal Fluids, and so promoting the Separation and Propulsion of the animal *alkaline Salts* from the Blood to the Parts, which become affected with Pain.

§. 1130. Therefore it seems very just to impute the new Production of the GOUT in this Gentleman, to the *animal Food*, which he lived upon many Months before the Return of it, a Sort of Food, which contains all the constituent Parts of the *gouty Hu-*  
mour,

*mour*, and of the *Stone*, as it abounds with *animal alkaline Salts*, and *animal Oil, Air, and Earth*; the two former are in no vegetable Aliment, as we have before observed.

§. 1131. This Gentleman's Case, in my Opinion, plainly proves two Things.

1. That the *Gout* may be produced by living on *animal Food*; and it may be, (in Places where the *WATER* is not *petrifying*) this Kind of Food is the chief Cause both of the *Gout*, and *Stone*, in those who are afflicted with them; which is a Point deserving Consideration.

2. That the *GOUT* may be cured by a *vegetable Diet*; which was also clearly proved by the Experience of the Reverend Mr. *Sleigh*, §. 1093, 1094.

### C A S E III.

*The Case of J. T. DESAGULIERS, L. L. D.  
F. R. S, &c. concerning the GOUT, in a  
Letter to THEOPHILUS LOBB, M. D.  
F. R. S.*

*S I R,*

§. 1132. ' As you have desired me to  
' be very circumstantial in my Account, I  
' am



‘ am willing to comply with your Request,  
‘ tho’ perhaps several Particulars may seem  
‘ trifling to those, who do not consider  
‘ Symptoms, and *Phænomena* as Physicians  
‘ do ; and therefore, since I am not a Judge  
‘ of what may be for the publick Good in  
‘ the Hands of a Physician, I shall rather  
‘ mention useless Circumstances, than omit  
‘ any Thing that may be of Advantage for  
‘ the Health of others.

§. 1133. ‘ I continued in very good  
‘ Health till the Year 1717, when I had a  
‘ little Attack of the GOUT in the *Joint* of  
‘ my *great Toe* ; which I took to be a Strain,  
‘ as I suppose *gouty* People are used to do,  
‘ when they are first visited with it.

§. 1134. ‘ Another Attack, or two went  
‘ off in that Manner, I still being unwilling  
‘ to believe it was the *Gout*, because my  
‘ Parents never had it ; and I thought *hard*  
‘ *Drinking* was necessary for that Acqui-  
‘ sition, which I knew I had always  
‘ shun’d.

§. 1135. ‘ After this I had painful FITS  
‘ of the GOUT, chiefly in my *great Toes*,  
‘ for *three Weeks*, or a Month together ;

‘ and such a *Soreness* left, that I was forced  
 ‘ to go with a cut Shoe.

§. 1136. ‘ These FITS I had two, or  
 ‘ three Times in a Year, but at no stated  
 ‘ Times.

§. 1137. ‘ I generally lived low, during  
 ‘ the Violence of the Fit ; eating *Pudding*,  
 ‘ and *Fish*, and *Water Gruel*. I was with  
 ‘ Difficulty persuaded sometimes to drink a  
 ‘ Glas of *Mountain Wine*, with which I  
 ‘ generally mix’d *Water* : For I always  
 ‘ thought the Advice, which most People  
 ‘ give to drink strong Wine to keep the  
 ‘ *Gout* out of the *Stomach*, is comply’d  
 ‘ with readily by *gouty* Persons, because they  
 ‘ generally love Wine ; but that, however,  
 ‘ the *Gout* may that Way be thrown out  
 ‘ to the Extremities ; yet doing this, is  
 ‘ laying a Foundation for another severe  
 ‘ Fit.

§. 1138. ‘ Indeed if I had had the GOUT  
 ‘ in my *Stomach*, or any Symptom like it,  
 ‘ I would then drink strong Liquors in the  
 ‘ Fit.

§. 1139. ‘ After this, I had the GOUT in  
 ‘ other Parts of my Feet, as among the  
 ‘ Bones of the *Tarsus*, *Metatarsus*, and on  
 ‘ the

‘ the *Achilles* Tendon ; and generally was  
‘ seized with it in *cold Weather* ; the Sum-  
‘ mer Season being very favourable to me.

§. 1140. ‘ If in the Summer my Business  
‘ allow’d me so much Time, as to go often  
‘ into the *Thames*, or to wash in any other  
‘ temperate Bath, if the *Thames* was too  
‘ cold ; or to *sweat*, and *wash*, in a *Bagnio* ;  
‘ as also to ride on Horseback, I generally  
‘ escaped that Winter.

§. 1141. ‘ I apply’d to the Part affected,  
‘ Stuphes dipp’d in a warm Decoction of  
‘ *Herbs*, and *Camomile Flowers* with *Salt*,  
‘ and *Spirit* of Wine ; which Application  
‘ repeated successively for half an Hour,  
‘ generally gave me Ease ; but I cannot tell,  
‘ whether or no it shorten’d the Fit.

§. 1142. ‘ Those outward Applications,  
‘ which gave me Ease one Time, proved  
‘ quite ineffectual another.

§. 1143. ‘ I found great Benefit twice by  
‘ a *Balsam* from AFRICK call’d *Whyddaw’s*  
‘ *Balsam* ; but afterwards it did me no  
‘ Good.

§. 1144. ‘ I began now to have several  
‘ FITS of the GOUT after one another in a  
‘ Winter, upon catching the least Cold,



‘ sometimes in my *Knees*, sometimes in my  
 ‘ *Hands*, in my *Elbows*, and in my *Insteps* ;  
 ‘ but these several Fits were shorter each,  
 ‘ than those which I used to have at first,  
 ‘ when it was confined to my *great Toe* ;  
 ‘ then I left off supping, and outward Ap-  
 ‘ plication, fearing I should drive it from  
 ‘ one Part to another.

§. 1145. ‘ The Remedy I made Use of  
 ‘ for some Time after this, was only *Pati-*  
 ‘ *ence*, and *Flannel* ; with which last I not  
 ‘ only wrap’d the affected Part, but my whole  
 ‘ Body ; for as my Feet never *sweat* with-  
 ‘ out great Difficulty, all my Body must be  
 ‘ in a profuse Sweat, before I can get my  
 ‘ Legs and Feet to sweat at all, which, when  
 ‘ it can be brought about, always gives me  
 ‘ Ease ; but it never happens during the Vio-  
 ‘ lence of the Fit.

§. 1146. ‘ A Quart of *Thames Water*,  
 ‘ with or without a *Toast*, generally made  
 ‘ me *sweat* more than any Thing else taken  
 ‘ on Purpose. I did not find any Incon-  
 ‘ veniency (as to being weaken’d) by these  
 ‘ *profuse Sweats* ; for very little of the Wa-  
 ‘ ter pass’d by Urine.

§. 1147. ‘ I generally took a *Purge*, or  
 ‘ two

‘ two, when I thought the Fit was going  
‘ off.

§. 1148. ‘ I now wore two Pair of Stoc-  
‘ kins constantly by Day, and lay in woollen  
‘ Stockins.

§. 1149. ‘ If upon catching Cold, I had a  
‘ little Attack in my *Knee*, above my Heel  
‘ behind, or about my Ankle, a *Flannel*  
‘ *Roller* worn Day and Night, would often  
‘ make the Part perspire, and remove it.

§. 1150. ‘ The *Fits* in my Knees com-  
‘ monly left a Weakness behind.

§. 1151. ‘ When I have not had the  
‘ *Gout*, as in Summer, I have continued to  
‘ drink Water at Night, and sweated very  
‘ much, especially after a plentiful Supper;  
‘ and often I could not sleep till I began to  
‘ sweat.

§. 1152. ‘ I found great Help by having  
‘ my Legs and Feet rub’d every Morning  
‘ with a coarse Towel. I began to grow  
‘ fat about the Year 1709, and began to  
‘ grow *sleepy* after Dinner, when I was first  
‘ attacked with the *Gout* 1717, and conti-  
‘ nued so till the Year 1737, when I went  
‘ into the *vegetable Diet*.

§. 1153. ‘ I strove as much as I could

‘ against this *lethargick* Disorder ; but it used  
 ‘ to overcome me generally before a Fit of  
 ‘ the *Gout*, which I could foretel by it ; but  
 ‘ I was less sleepy after the Fit.

§. 1154. ‘ In the Years 1733, 1734, 1735,  
 ‘ 1736, I was laid up with the *Gout* at least  
 ‘ six Months in the Winter, by a Succession  
 ‘ of nine or ten Fits rather than one con-  
 ‘ tinued Fit : For I was often flatter’d with  
 ‘ the Hopes that the Fit was going off, when  
 ‘ it return’d in some other Part in two or  
 ‘ three Days.

§. 1155. ‘ In the Year 1736, going out  
 ‘ in cold Weather after a Fit, I catch’d cold,  
 ‘ and a violent *Quinsey* ; in which it was  
 ‘ thought, the *Gout* was concern’d, by Dr.  
 ‘ *A. Stewart*, who told me, that if he  
 ‘ could give me the *Gout* again, the *Quinsey*  
 ‘ would soon be well. I follow’d his Di-  
 ‘ rections, and the *Gout* did return severely,  
 ‘ but the *Quinsey* went off in two or three  
 ‘ Days.

§. 1156. ‘ In *June* 1737, I was seized  
 ‘ with a violent Fit of the blind *PILES*, so  
 ‘ as to resolve to be cut ; but being willing  
 ‘ to purify my Blood before the Operation,  
 ‘ I DETERMIN’D to leave off eating all *Flesh*  
 ‘ and



‘ and *Fish*, and to drink nothing but *Water* ; and took every Morning a *Bolus* of  
‘ *Flower of Brimstone*, and *Treacle*.

§. 1157. ‘ For about a Fortnight that I  
‘ lived upon *Milk, Bread, Puddings, Roots,*  
‘ *Seeds, Fruits,* and other *Vegetables*, I  
‘ found myself weak ; but soon recover’d  
‘ it ; and the *PILES* went quite away in three  
‘ Weeks.

§. 1158. ‘ Finding myself then very well,  
‘ I resolved to continue in this Way for my  
‘ *GOUT*. My Limbs grew stronger ; I ceased  
‘ to be *sleepy* after Dinner, except three or  
‘ four Times in the Space of eleven Months,  
‘ that I continued in this Way ; and that  
‘ was after a plentiful Dinner of Variety of  
‘ *Puddings*, and *Tarts*.

§. 1159. ‘ My *FAT* was so reduced, that  
‘ my Waistcoat was taken in near four  
‘ Inches. I forgot to weigh, when I began  
‘ this ; but in *October* I weigh’d just 224  
‘ Pounds *Averdupois*, one Pound less than  
‘ I weigh’d in the Year 1735, having very  
‘ much increased in Weight from 1735, to  
‘ 1737.

§. 1160. ‘ I did not find any sensible Loss  
‘ of Spirits for ten Months. I generally drank

‘ an Infusion of *Saffron* with *Water* and *Su-*  
 ‘ *gar* instead of *Wine* in Company.

§. 1161. ‘ In the Spring of the Year,  
 ‘ [1737-8,] I had *one short Fit* of the GOUT  
 ‘ of about fifteen Days, and no more, after  
 ‘ having had for about half a Day at a Time  
 ‘ a *little Pain* in all those Places where I  
 ‘ used to have the Gout formerly ; as if there  
 ‘ was not gouty Humour enough to make  
 ‘ a Fit.

§. 1162. ‘ Here I must not omit to men-  
 ‘ tion, that I never had any *Chalk Stones*,  
 ‘ when my Gout was at the worst.

§. 1163. ‘ I design’d never to quit my  
 ‘ *Regimen*, finding no longer any Desire  
 ‘ of indulging my Palate out of the Com-  
 ‘ pass of my new Diet, if I had not been  
 ‘ frighten’d out of it by a *paralytick At-*  
 ‘ tack.

§. 1164. ‘ In *May* 1738, sitting at Din-  
 ‘ ner, *I lost my Speech* without any other  
 ‘ Symptom, or Inconveniency ; but af-  
 ‘ ter about five Minutes, I recover’d it  
 ‘ again perfectly. I did not much regard  
 ‘ it then ; but the same Thing happening  
 ‘ again a Fortnight after, I thought it Time  
 ‘ to

‘ to give over my *strict* vegetable Food, and  
‘ now I am in a *trimming* Diet.

§. 1165. ‘ I eat any Thing at Dinner,  
‘ but *Salt Meat* ; and drink *salt Drink*, or  
‘ *Wine*, as well as *Water* ; but Morning  
‘ and Night I take *Milk* or *Bread*, and *Rai-*  
‘ *sins*, or *Prunes*, for Supper. Perhaps once  
‘ in a Fortnight I eat *Meat*, or *Fish* for  
‘ Supper.

§. 1166. ‘ I have this Year had *one Fit*  
‘ of the GOUT, but shorter than what I had  
‘ last Year ; so that I am sure my *vegetable*  
‘ *Diet* has done me a great deal of Good ;  
‘ tho’ I think it was not proper to continue  
‘ it any longer.

§. 1167. ‘ I am not so *thirsty* ; neither  
‘ do I *sweat* near so much as I did, tho’ I  
‘ lye in *Flannel* ; but I make a great deal  
‘ more Water, and find myself better in  
‘ Health than I have been these ten Years.

‘ If this Relation be as satisfactory as it  
‘ is long, I have my End, and am,

*S I R,*  
*Your most humble Servant,*

J. T. DESAGULIERS, *senior.*



§. 1168. *P. S.* ‘ As a farther Proof that  
 ‘ what relieves one Person in the *Gout*, will  
 ‘ do another no Good, and sometimes have  
 ‘ no Effect on the same Person, that it gave  
 ‘ Ease to before, I here must mention my  
 ‘ using the *Oils* recommended by Dr. *Stuke-*  
 ‘ *ly*, which always cures him of a Fit of  
 ‘ the *Gout*.

§. 1169. ‘ After having had several *Fits*  
 ‘ of the *GOUT* in the Winter of the Year  
 ‘ 1736, upon the Return of it, I used the  
 ‘ *Oils* by the Permission of Dr. *Stukely*,  
 ‘ and found myself much *better* by their  
 ‘ Application, according to the Directions  
 ‘ given in the Paper of the Person, who  
 ‘ sells them ; but after a few Days being  
 ‘ taken violently with the *Gripes* ; and not  
 ‘ knowing whether to attribute that Dis-  
 ‘ order to the *Oils* driving back the *Gout*  
 ‘ into my Bowels, or catching Cold, (which  
 ‘ last might most probably be the Cause) in  
 ‘ my Doubt I left off the *Oils*.

§. 1170. ‘ Last WINTER, while I was  
 ‘ in my *vegetable Diet*, and found the  
 ‘ *gouty Humour* much diminished, in the  
 ‘ Fit that I had, I ventured again to use the  
 ‘ *Oils*, (§. 1169.) but then found *no Bene-*  
 ‘ *fit*

‘ fit at all by them ; but went thro’ the several Stages of *Pain* as usual, *viz.* *Numbness*, a *Burning*, a violent *Shooting*, or *Stabbing* of the affected Part with exquisite *Pain* ; then again a *Burning*, and lastly *Numbness* before Recovery.

§. 1171. ‘ This Winter, since I left off the strict *vegetable Diet*, the GOTT seized my left Knee, which remain’d *weak* since the last Year’s Fit ; but immediately swell’d, which gave me Hopes the Fit would be short ; because I usually had two or three Days *Pain* before the *Swelling*, after which I used to be easy ; so it happen’d now. All that I did was to rub on a little *Olive Oil* to make the Skin supple, in order to favour the Swelling.

§. 1172. ‘ I have had since, some little Attacks in the *Tarsus*, sometimes of one, and sometimes of the other Foot ; but the Pain is so gentle, and the Duration so small, being of about a Day without *Swelling*, or *Confinement*, that I do not call these Disorders Fits of the Gout, but look upon them as the Effect of *Cold* ; because the Change of Weather to warm,  
‘ or

or the Application of a *Flannel* Roller  
carries them off.

§. 1173. Dr. *Desaguliers* in this Letter, has given us a very particular History of the GOUT from the first minute Beginnings of it; and described the Manner of its Advances, and melancholy Increase; and useful Observations may be made from divers Particulars related in it. I shall begin with those, which more immediately shew the *Probability* of curing this Distemper by suitable *Aliment*; which are the following.

§. 1174. *Obs.* 1. That this Gentleman was first seized with the Gout in the Year 1717, (§. 1133.) that is about twenty Years before he began to live on the *vegetable Diet*.

§. 1175. *Obs.* 2. That from the Time of his being first attacked with this Disease, it gradually increased on him, till it had attained a very terrible and durable Force. The *gouty* HUMOUR, which began to shew itself by moderate or gentle Attacks, became more potent, and produced FITS, which continued three Weeks, or a Month together, (§. 1135.) and return'd two or three  
Times



Times in a Year, (§. 1136.) and at Length was so much increased, that in the Years 1733, 1734, 1735, 1736, it laid him up at least six Months in the Winter, (§. 1154.) Here is an Instance of the Gout advanced to a dreadful Height.

§. 1176. *Obs.* 3. I must now observe, that in *June* 1737, he left off eating all *Flesh*, and *Fish*, and enter'd on a *strict vegetable Diet*, (§. 1156, &c.)

§. 1177. *Obs.* 4. That he continued strictly in the vegetable Diet eleven Months; that is, till some Time in the *May* following.

§. 1178. *Obs.* 5. That by Means of his vegetable Diet, he escaped the Gout all the ensuing *Winter*, and only had *one short Fit* of it in the succeeding *Spring*, (§. 1161.) A vast, and an happy Alteration this, in the State of the Doctor's Health! who instead of being laid up six Months, or all the Winter Season, as usual, had only *one Fit* of it of about fifteen Days Continuance, and no more.

§. 1179. It appears, in my Apprehension, very rational to infer from this Event, (§. 1178.) that the GOUT may be cured by suitable *Aliment*.

§. 1180. *Obs.* 6. That in *May* 1738, the Doctor return'd to the Use of *animal Food* at his Dinners ; and perhaps once in a Fortnight *Meat*, or *Fish*, for Supper ; and likewise to drink *malt Drink*, and *Wine*, (§. 1165.) and that notwithstanding this Return to animal Food, and a temperate Use of fermented and spirituous Liquors, he has this Year had only *one Fit* of the *Gout*, and that *shorter* than what he had the last Year, (§. 1178.) so great, and so lasting, is the Benefit he received by the eleven Months Use of the vegetable Diet ; and this Event also clearly proves the *Probability* of curing the *Gout* by suitable *Aliment* ; which is the Point I am endeavouring to evince.

§. 1181. I shall now make some Remarks on other Particulars in the Doctor's Letter, apprehending that my doing so may be of Service.

1. The Doctor thought *hard drinking* necessary to produce the GOUT, §. 1134.

*Remark.* I may here observe, that his own Experience, and the first, and especially the second Production of the GOUT in the Reverend Mr. *Sleigh*, who was always temperate ; and after his Return to animal Food, drank



drank no spirituous Liquor ; and the like Production of it in the Reverend Mr. *Denham*, who only drank a very small Quantity of *Cyder* after his Return to *animal* Food, are undeniable Proofs of the contrary.

§. 1182. 2. The Doctor apprehended, that drinking *Wine* in a Fit of the *Gout*, lays a Foundation for another, §. 1137.

*Remark.* That his Apprehension in this Particular was mistaken, appears from what has been observed, §. 723, &c. which shews that *Wine* does not contribute to the Production either of the *Stone*, or *Gout* : Indeed, when a Person is under a Fit of the *Gout*, attended with a *symptomack Fever*, drinking *Wine* is improper, on the Account that it will increase his Fever, and his Pains.

§. 1183. 3. The Doctor observed, that the *Gout* seized him in cold Weather, and that the Summer was favourable to him, §. 1139.

*Remark.* The Reasons of this may be seen in my *Treatise on Painful Distempers*, §. 515, *ad* 518.

§. 1184. 4. The Doctor took Notice, that if he bath'd often, sweated, and rode  
on



on Horseback in the Summer, he *generally escaped* the following Winter, §. 1140.

*Remark 1.* This Event of *Bathing, Sweating, and Exercise*, shews that they are Means very proper to be used for curing the Gout. *Bathing* in *cold Water*, and *Riding*, and indeed any other bodily Exercise, strengthens the Action of the Solids, and thereby promotes the Comminution of the Parts of the gouty Humour, and the rendring them passable out of the Body; and by *Sweating* there is some Evacuation of them.

2. Therefore Bathing, moderate Sweating, and Exercise, may profitably be joined with the Use of suitable Aliment for the Cure of the Gout.

§. 1185. 5. SWEATING in his Feet always gave him Ease, §. 1145.

*Remark.* This it did as the gouty Humour was discharged thereby; and this shews, that as there are Means proper to open the Pores, relax the Vessels, and bring the Feet into a Sweat, they may with Advantage be used by Persons under the Fit of the Gout.

§. 1186. 6. Fits of the Gout in his Knees commonly left a Weakness, §. 1150.

*Remark.* The Reason of this Effect is pretty

pretty manifest; the gouty Humour, which had been impelled into the Vessels affected, did greatly stretch them; and after it was dislodged, and the Vessels freed from it, it was some Time before they contracted to their healthful Tenseness: But in such Cases there are proper Remedies for reducing the too far stretched Fibres to their natural State.

§. 1187. 7. Little Attacks of the Gout in his *Knee*, or *Ankle*, were commonly removed by a *Flannel Roller*, which made the Part perspire, §. 1149.

*Remark.* This deserves the Remembrance of those, who are troubled with the Gout; and so does the Advantage he had by the *Rubbing* of his Legs and Feet with a coarse Towel, §. 1152.

§. 1188. 8. In the Year 1736, the Doctor was seized with a violent *Quinsey*, on going out in cold Weather after a Fit of the Gout, and catching Cold; which Dr. *Alexander Stuart* was so happy as to remove by his judicious Endeavour to bring on the Gout again, §. 1155.

*Remark.* The Success of Dr. *Stuart's* Method, shews the Prudence of considering,



that whatever Disease befalls Persons, who have the Gout in their Blood, there may be a Mixture of the *gouty* Humour, either to bring it on, or to increase it; and that the Patient, therefore, ought to be treated accordingly.

§. 1189. 9. In *June* 1737, the Doctor was seized with a violent Fit of the *blind Piles*, (§. 1156.) which were cured by living three Weeks on a vegetable Diet, (§. 1157.) and taking a BOLUS of *Flower of Brimstone*, and *Treacle* every Morning.

*Remark.* A vegetable Diet therefore is proper for Persons, who have the *blind Piles*: It conduces to thin the Blood, to render its Circulation more free and easy, and consequently to remove those Obstructions, which occasion'd that painful Disease.

§. 1190. 10. The Doctor by his *vegetable* Diet, likewise became free from that *Sleepiness*, which usually attended him after Dinner, §. 1152, 1158, which was an Advantage deserving the Exercise of some Self-denial.

§. 1191. There are other EFFECTS of his living strictly on a *vegetable Diet*, and his  
total



total *Abstinence* from *Wine*, and all other spirituous Liquors; particularly,

1. The *WEAKNESS* he complain'd of in the Beginning of it, §. 1157. And I may here observe, that Mr. *Denham*, while he lived on *vegetable* Food, found, that if he engaged in any laborious bodily Exercise, he was *very apt to sweat*, and that his Spirits would not hold out so long as usual, (§. 1110.) Hence we may conclude,

§. 1192. *Corollary* 1. That *vegetable* Food is not so strengthening as animal.

§. 1193. *Corollary* 2. That *animal Food* is proper for Persons engaged in laborious Employments.

§. 1194. 2. Another Effect of his living entirely on *vegetable* Aliments, was great Loss of Fat, (§. 1159.) and thus it happen'd to the Reverend Mr. *Sleigh*, (§. 1082.) which may well lead us to think, that the *vegetable* is not so nourishing as the *animal* Food; that is, it does not contribute so much to maintain, and increase the Bulk of the Body.

§. 1195. *Corollary* 1. Hence (§. 1194.) we may infer, that *vegetable* Food is the

most proper for Persons that are corpulent, and *too fat*.

§. 1196. *Corollary 2.* That *animal Food* is one Sort of suitable Aliment for Persons that are *too lean*, if they are free from those Diseases, which may be increased by it.

§. 1197. There is yet another Thing remarkable in the Doctor's Case, *viz.* That in the eleventh Month of his living strictly on a vegetable Diet, he was twice in a Fortnight taken *speechless*, §. 1164.

§. 1198. These *paralytick* ATTACKS, (§. 1197.) justly alarm'd him; and determin'd him to return to a moderate Use of *animal Food*, and of *Wine*; and it must be observed that he has had no Return of his *paralytick* Disorder, since his Return to the Use of some *animal Food*, and *Wine*.

§. 1199. I am inclined to think, that if the Doctor had continued the Use of *Wine*, thro' the Course of his vegetable Diet, he would not have had those *paralytick* Attacks, (§. 1197.) and that if he had not return'd to the *animal Food*, but only to the Use of *Wine*, he would have had the same Advantage against that Disorder, (§. 1197.) which he has enjoy'd since his last Change of Diet. The known Qualities of *Wine* induce



induce me to believe the Benefit he has received is owing to that, and not to the animal Food he takes.

§. 1200. I apprehend that a moderate Use of Wine, and other spirituous Liquors of like Strength, very needful for Persons that are *fat*; and for those, who lead studious Lives, to maintain the healthy Tenseness of the animal Vessels, a sufficient Force in the Action of the Heart, and Arteries, and a due Circulation of the animal Fluids; which is one proper Way to keep off paralytick Distempers.

§. 1201. All that I shall further observe in the Account this Gentleman has obliged us with, is that in the Management of himself under Fits of the Gout. He made Use of various *outward* Applications; and particularly of *Olive Oil* in his last Fit, (§. 1171.) and, as I apprehend very much to his Advantage.

§. 1202. The rubbing of the *Olive Oil* pretty warm on the Part affected, appears to me not only a safe Method, but what is like to be exceeding useful, if, at the same Time, suitable Things are taken internally to alter the *alkaline* Acrimony of the Blood,



and to assist Nature in propelling the gouty Humours to the extreme Parts, and thro' the excretory Ducts *ad extra*. For this Oil will not heat, and inflame the Part affected; but will often abate Inflammations; and will contribute much to blunt the Points of the acrid Particles of the *gouty Humour*: It will not repel any morbid Particles; nor contract the Vessels, as hot *aromatick Oils* do, when applied: No, but it will supple the Vessels, and (as Dr. *Desaguliers* well expresses it) *favour the Swelling* of the Part affected, and so an Evacuation, or a Perspiring of the gouty Humour thro' the Vessels it relaxes in the Superficies of the affected Part, to the great Relief of the Patient.

§. 1203. It is an easy Remedy, which may be had always at Hand; and as it may be useful on many other Occasions; so it should be constantly kept in every Family.

#### CASE IV.

*The Case of an OFFICER in his MAJESTY'S Guards, who has lived near fifteen Years on a vegetable Diet.*

§. 1204. AN OFFICER in his MAJESTY'S *Corps of Guards*, who has been cured of the GOUT in his *Stomach* by a *vegetable Diet*,

*Diet*, favour'd me with a particular Account of his Case, which I wrote from his Mouth, and is as follows.

§. 1205. In the Year 1720, he was taken with a violent PAIN in his *Stomach*, which his Physician said was a *flatulent Gout* there.

§. 1206. Some Years before, he had one FIT of the *Gout* in the great Toe of his right Foot, which continued about three Weeks.

§. 1207. The PAIN of his *Stomach* (§. 1205.) continued near four Years off, and on, and frequently very violent; all which Time he had a voracious Appetite, almost always craving; and could eat *animal Food* for Breakfast, Dinner, and Supper; and did eat of it abundantly: But while he did so, he was greatly troubled with *Flatulencies*; and was frequently *melancholly*, and under such Uneasiness, and Anxiety of Mind, that Life was a Burden to him.

§. 1208. He lost Flesh, grew pale, and weak, notwithstanding his feeding heartily on animal Food.

§. 1209. The greatest Part of the four  
Z 4 Years



Years of this Distemper, he was under the Care of a very learned, judicious, and eminent PHYSICIAN. He was *blooded, vomited, purged*, and used warm *aromatick Medicines*, &c. but without any Benefit at all.

§. 1210. He went twice to BATH, where he found his *Pains* and Disorders much abated, while he drank the *warm Waters* regularly : And while he was there, he went both into the *hot*, and *cold Baths* ; into the *hot* in the Forenoons, and into the *cold* in the Afternoons ; but did not perceive any Benefit, or Inconvenience from so doing.

§. 1211. About a Fortnight after he left BATH, the *gouty Pains* in his *Stomach* began to return, and increased till by Degrees they became as violent as ever.

§. 1213. In the Year 1723, having been advised to it for the Benefit of the *Air*, he went into *Italy*, where he resided about a Year, and spent about five Months of it at *Rome* ; and abstained from Flesh when the People were obliged to eat *Megre* : And found himself better in those Times of Abstinence.



§. 1214. A Year before he went to *Italy*, he left off the brown Meats, such as *Beef*, *Venison*, *Hare*, *Goose*, *Pork*, &c. and kept to the WHITE, as *Veal*, *Chickens*, and *Turkey*, &c. and had his Meat weighed, allowing himself only twelve Ounces a Day.

§. 1215. He return'd to *London* in the Year 1724, and was prodigious *thin*, and remain'd in the same ill State of Health when he came Home, that he was under when he went Abroad; and therefore was advised to go to *Aix la Chapelle*, and drink the Waters.

§. 1216. But instead of following that Advice, he resolved to try what Relief might be obtained by a *vegetable Diet*; and in *July* this Year 1724, he began to leave off the animal Food by Degrees, lessening the Quantity of his daily Allowance, and took his last Leave of it about the 16th of the *October* following; and has continued to live on vegetable Food ever since, without drinking any *spirituous* Liquor.

§. 1217. It may be of some Use to describe his DIET. His BREAKFASTS are on *Bread* and *Butter*, or *Toast* and *Butter*, or *Seed-cake*; and for Drink, *Coffee* with *Milk*, or *Tea* with *Milk*, or *Chocolate*: Sometimes  
on

on *Sago* and *Milk*, or *Rice Milk*, or *Milk Porridge*, or *Water-Gruel*, or *Burgoe* with *Water* and *Sugar*, or *Milk* and *Sugar*.

§. 1218. His DINNERS are on *Puddings* of any Kind, except *Suet* ; *Pyes* of all Sorts, except those that have *Meat* ; *Brocoli*, *Cabbage*, *Sprouts*, *Turnips*, *Carrots*, *Parsnips*, *Potatoes*, *Spinach*, *Asparagus*, *Peas*, and *Beans* with *Butter*, *Salt*, and *Pepper* ; *Raw Sallets*, *Goss* and *Silesia Lettices*, with *Vinegar* or the *Juice of Orange*, *Oil*, and *Mustard* ; and *Fruits* of all Sorts in their Seasons. Of late, he sometimes eats *boild Spinach* and *potch'd Eggs*, or *Toast* and *Butter* with *potch'd Eggs* on it.

§. 1219. He very rarely makes any SUPPER.

§. 1220. *Sago*, *Pearl Barley*, *French Barley*, in *Puddings*, as well as in *Gruels* ; *Carrots* and *Turnips* are most grateful Food to his Stomach. In Summer he often dines on *raw Vegetables*, and *Bread*. He eats *Cucumbers* with their *Rind*, and sometimes four or five of them together.

§. 1221. He eats *Apples* abundantly ; but neither *Cucumbers*, nor *Melons*, except it be a good Summer to favour their Ripening.



ing. *Jerusalem Artichokes*, and *Parsnips*, were to him the hardest of Digestion. *Pears* he always found cold in his Stomach; but no Inconvenience from the Quantity of *Apples* he eat.

§. 1222, In the first three Months of his living on a vegetable Diet, he did not much observe stated Times for his Meals, but kept *eating* in a Manner all Day long; and especially of *Bisket* and *Apples*. He has now continued in the *vegetable* Way of Food near fifteen Years.

§. 1223. And the ADVANTAGES of his leaving off all *animal Food* have been very considerable: He found some Ease presently on diminishing the Quantity of that Sort of Food; and his *Pains*, and other Disorders continued gradually abating; so that before the End of *November* 1724, he became perfectly free from them; so speedy was his Recovery, and he has had no Return of them since that Time: But lives free from Pain; his Spirits are always chearful, and no Clouds of Melancholy interrupt the Comfort of his Mind.

§. 1224. This Gentleman is now about sixty-two Years of Age; and within the last  
eight



eight Years, has been able to walk to *London* from his Seat in the Country, about twenty-five or twenty-six Miles distant, and back again the same Day; and still is well able to walk twenty-five or thirty Miles a Day; and can do as much hard Work in a Day, as any common Labourer.

§. 1225. And HE remains *hardy*, as well as strong. He wears no Waistcoat, but only a Coat in the Winter, as in the Summer. Five Hours Sleep is always sufficient for him; and he can immediately, after his Meals, apply himself to Exercise, or other Business, without any Inconvenience. Happy the Constitution of those Persons, who both have Resolution enough, and can bear to imitate the Example of this Gentleman!

§. 1226. Now as to this Case, (§. 1204, &c.) the following Particulars are remarkable.

1. The Quickness of his Recovery after he began to live entirely on vegetable Aliments: For he took his last Leave of *animal Food* about the Middle of *October*; and before the End of the *November* following, that is, within seven Weeks, he became  
free

free from those tormenting *Pains*, and *Flatulencies*, and Fits of *Melancholy*, which had render'd his Life miserable four Years together and were incurable by all the Means he had before used.

§. 1227. This Event (§. 1226.) may well encourage Persons under *chronical* Diseases to try what Advantage they may obtain by a *vegetable* Diet.

§. 1228. 2. It seems that he had an *alkaline Acrimony* in his Blood, and the Humours secreted from it, in a very great Degree. This I infer from the Quality of his former Diet; his eating abundantly of animal Food, and from the Voraciousness of his Appetite; (§. 1207.) and his loosing Flesh, and growing pale, and weak, §. 1208.

§. 1229. The Consideration of this (§. 1228) may help us to understand how he came to be so speedily relieved, and so effectually cured by *vegetable Aliments*; and that these important Advantages were gained, not only by laying aside all Use of those animal Aliments, which were to his Distempers, what Fuel is to Fire, but by Means of an *acid Quality* in many of the Vegetables, which  
he



he plentifully used ; as in *Apples*, Summer *Fruits*, &c.

§. 1230. 3. It must be observed, that he was very *lean* ; and, as I understand it, it was his Constitution to be always lean, tho' not to such a Degree, as when he enter'd on the vegetable Diet.

§. 1231. Hence (§. 1230.) it appears that less Nutriment was wanted to maintain that Bulk of Body, (which in him was the healthy Standard) than corpulent Persons have Occasion for ; and that the daily Wastes of his *Fluids*, and *Solids* were sufficiently repair'd by the vegetable Food.

§. 1232. Hence (§. 1230.) likewise we may apprehend the Reason, why he had none of the Inconveniencies, which happen'd to the Gentlemen in the three foregoing Cases.

§. 1233. If we compare the Case of this Gentleman with the foregoing, it may appear, that a strict vegetable Diet is more suitable to some Constitutions than to others. But from the Advantages, which he and several other Persons have found by a *vegetable Diet* against those *chronical Dis-*

EASES,



EASES, which afflicted them, while they lived on *animal Food*, we may rationally infer, that *vegetable Aliments*, are an Antidote against the Inconveniences of *animal Food* ; and therefore, that it is prudent for People to eat a great deal of Garden Things with their Meat.

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## C H A P. XXI.

*Containing an Account of the principal Things to be intended, and endeavour'd for Persons afflicted with the Stone, and Gout, in order to their Recovery from them, with some general Rules preliminary to the Rules of Diet.*

§. 1234. **T**HE next Thing I propos'd, (§. 25.) was to lay down some RULES of Diet, in the due Observance of which, Persons afflicted with the *Stone*, or *Gout*, may with the divine Blessing, become free from them.

§. 1235. Here it will be proper for me first to mention the Things, which should be intended, and endeavour'd in Order to a Recovery from these terrible Distempers, (§. 1234.) the Principal of which are the four following Particulars, *viz.*

1. To alter the *Quality*, and diminish the *Quantity* of the *alkaline animal Salts* in the Blood ;

Blood ; because a Redundance of them is one of the essential Causes of both these Diseases ; and indeed of many others.

§. 1236. ACID, and *acescent* Vegetables, and Liquors of an acid Quality, are conducive to this Intention, §. 1235, N<sup>o</sup> 1.

§. 1237. 2. To increase the Force, or Strength of the Action of the Heart, and Arteries, when it is deficient ; as it often happens, especially in Bodies troubled with the *Gout*, and always in those, who are habitually *chilly*, and whose Flesh is flabby, and Vessels too lax.

§. 1238. A moderate Use of WINE, and of AROMATICKS, such as *Cloves*, *Mace*, *Nutmegs*, *Cinnamon*, and *Pepper*, &c. is conducive to this End, §. 1237.

§. 1239. This Indication (§. 1237.) is a Matter of great Importance, as the Comminution and Excretion of the Parts of superfluous, and morbid Humours depend so much on a due Measure of Strength in the Action of the animal Organs.

§. 1240. 3. Another Intention to be regarded, is to destroy that *viscid* Quality,  
A a which



which often is in the Fluids of those, who have the Gout.

§. 1241. For this Purpose, (§. 1240.) it is requisite to drink plentifully of small *acid* or *acescent* Liquors, which dilute and thin the animal Fluids; and, at the same Time, to use some warm aromatized Aliments for strengthening the animal Solids.

§. 1242. 4. There is one more Cardinal Point to be endeavour'd; and that is to destroy the Cohesion of the Parts of *gouty* Humours, and to *dissolve* any STONE that has been formed in either of the *Kidneys*, or *Bladder*.

§. 1243. This Intention (§. 1242.) I think may happily be accomplished by a right Use of those Aliments, which have a QUALITY *dissolvent* of the human *Calculi*. But before I lay down particular Directions about the *Diet*, I apprehend it may be of Service to premise some general RULES, which should be observed by all Persons, especially by those afflicted with the *Stone*, or *Gout*.

§. 1244. General RULE I. *Use daily moderate Exercise.*

§. 1245 The Observance of this Rule,  
(§. 1244.)

(§. 1244.) is necessary for divers important Purposes, *viz.*

1. To preserve due Strength in the Solids of the Body. The Action of the Muscles, and Limbs, in bodily Labour, promotes the Evacuation of the excrementitious and superfluous Humours by *Urine*, and *insensible Perspiration*, and sometimes by *Sweat*; and thereby frees the Body from that redundant Moisture, which would render the Fibres, the Vessels, and Muscles too lax; and consequently weak. Thus Exercise subserves the Preservation of the vital, and animal Strength.

§. 1246. 2. It is necessary for the Commi-nution and Excretion of superfluous, and redundant *alkaline Salts*; and consequently a necessary Means of freeing the Body from one essential Part of the *calculous* Concretions, and *gouty* Humours.

§. 1247. 3. It is likewise needful to promote the passing of the *calculous* Matter, (as the Parts of it dissolve, and separate) from any Stones in the *Kidneys*, thro' the Ureters, and out of the Body.

§. 1248. If EXERCISE be neglected, the fleshy Fibres, and Muscles, will gradually be-



come feeble ; the Action of the Heart, and Arteries deficient in its Force ; the component Parts of the Blood will not be sufficiently comminuted ; the *Secretions* will not be duly performed ; neither will the Humours secreted, long have their proper Quantity, or long retain their healthful Qualities : There will likewise ensue a Deficiency in the *Excretions* from the Body, and more especially in that important Evacuation, which is made by insensible Perspiration. Therefore EXERCISE should be acknowledged as one necessary Means for the Preservation of Health, and the Cure of chronical Diseases in general, and of the *Stone* and *Gout* in particular.

§. 1249. There is one CAUTION however, which should never be neglected ; that is, to avoid that *Sort*, and that *Measure* of Exercise, either which occasions Pain, or fatigues the Body.

§. 1250. Here I must observe, that the morbid Effects of *neglecting* EXERCISE come on by little, and little ; in a Manner not observable to the inactive Person. He is daily sowing the Seeds of Sickneſs, and thinks  
nothing



nothing of it, till some *chronical* Disease by manifest Symptoms discovers itself.

§. 1251. It would conduce much to the Health of People, if these certain Truths were more frequently in their Thoughts, and had a due Influence on their Conduct, *viz.* That EXERCISE of Body, and TEMPERANCE in the Use of proper Aliments, are as necessary to the Health of their Bodies, and the Chearfulness of their Minds, as *Food*, or *Rest*, or *Sleep* : But if they will indulge themselves in the Neglect of Exercise, and allow themselves Aliments improper for them ; or take proper Aliments in excessive Quantities, they must expect to fall under a Necessity of taking Medicines, or of languishing under some Distemper ; and have no Reason to hope for a Dissolution of the *Stone*, or Security from Returns of the *Gout*.

§. 1252. Many Persons indeed, by their Employments, are obliged to a *sedentary* Life, and cannot have Opportunities for those Exercises, which prove exceeding beneficial to others ; but these may have some Contrivances for moving, and exercising

their Muscles and Limbs, even tho' they were confined to their own Houses.

§. 1253. General Rule II. *Abstain from those Sorts of Aliment ; at least from that Quantity of them, that will contribute to the Increase of the Stone, and of the gouty Humour.*

§. 1254. The Importance of observing this Rule, (§. 1253.) is very obvious : For if we would extinguish a Fire, we must forbear adding Fuel to it ; and if we would live free from the *Stone*, and *Gout*, we should deny ourselves those Aliments, how grateful soever to our natural Appetites, which afford Matter for those painful Distempers.

§. 1255. Here I must observe, that all Sorts of ANIMAL FOOD ; that is, *Fish*, *Flesh*, and *Fowl*, contain all the Sorts of Particles which constitute either the *Stone*, or the *gouty* Humour ; and I think it adviseable, that Persons much afflicted with either of these Distempers, should totally abstain from every Kind of *animal Food*, at least till they are perfectly recover'd.

§. 1256. As for Persons who have these Diseases only in a tolerable Degree, I do not apprehend



apprehend a total Abstinence from animal *Food*, to be absolutely necessary; provided they make so much Use of Aliments of the dissolvent Kind, that the predominant Quality communicated to the Chyle, the Blood, and the Urine, be of a dissolvent Nature. See Experiment CLXXXVII, and §. 851.

§. 1257. General RULE III. *In the Use of proper, or improper Aliments, Persons should prefer those, which by Experience, they find will best agree with their Constitutions, and most easily digest in their Stomachs.*

§. 1258. I reckon all Sorts of animal Food *improper Aliments* for Persons afflicted with the *Stone*, or *Gout*, and indeed improper for People under various other Diseases.

§. 1259. And I acknowledge there is a great Difference between the several Sorts of animal Food; and that there is Reason to think, that those Animals, which live on other Animals, abound more with *animal alkaline Salts*, and *animal Oil*, than those, which live on Vegetables; and that



*brown Meats* may abound more with the constituent Parts of the *Stone* and *gouty Humour*, than the *white*. Yet it appears to me very requisite to lay down the last general Rule, (§. 1257.) and not to direct People to choose according to the Colour of the Flesh, whether it be white, or brown.

§. 1260. The Fitness, and Importance of this Rule, (§. 1257.) I think will be evident if we consider the Nature of digesting Food in the Stomach; and the Effects of what may be called a good Digestion there, and of that which is bad.

§. 1261. The DIGESTING of Food in the Stomach, as I understand it, is the Dissolution of its Parts by Means of the *Saliva*, and the *succus gastricus* secreted from the Blood by numberless Glands, and emptied into the Stomach, and there mixed with the Aliments.

§. 1262. These secreted Humours (§. 1261.) have a *dissolvent* Quality, and may be called *dissolving*, or *digestive* Juices; and are assisted by a *digestive* Heat, equal to the Heat of the Blood: And these occasion the Particles of the Aliment, received into the Stomach, to divide into lesser, and lesser; which is what

I call, their *Digestion*; and which are afterwards more subdivided, when they pass along the Intestines, and mix with the *bilious, pancreatick*, and other Humours secreted from the Blood; and which are likewise endow'd with *dissolvent* Qualities, by Means of which they are more and more subdivided till they are reduced to that *Minuteness*, as to be fit for the Occasions of the Body; that is, to repair the adventitious Defects of the Solids, and to recruit the daily Waste, or Expence of the animal Fluids, by being assimilated into their Nature, and thus to keep up their Quantities to the healthy Standard. Thus it happens in what may be called a *good Digestion*, by Means of which all the Wants of Nature are supplied; and the superfluous Parts of the Nutriment, being minute enough, pass out of the Body thro' the excretory Ducts, and leave it in perfect Health.

§. 1263. There is a great DIFFERENCE in the Nature of *dissolvent* Liquors. A dissolvent Liquor may be able easily to dissolve one Sort of Substance, and incapable of producing any Effect on another; which other Substance, by a different dissolving Liquor,



quor, may nevertheless have the Cohesion of its Parts easily, and entirely destroy'd.

§. 1264. Thus there is a great Difference between the *digestive*, or *dissolving Juices* of different Persons; and very often in the same Persons in the different Periods, or Times of Life; as may well be infer'd from the Differences, which occur to Observation.

§. 1265. One Person loves *Cheese*, he eats it with Pleasure; it agrees with him, and no Inconvenience follows upon it: Which is an Evidence, that his *digestive Juices* have that dissolvent Quality, which is capable sufficiently to destroy the Cohesion of the Parts of this Sort of Aliment. Another disgusts the Smell, and Taste of it; and if he eats any, it makes him sick; which, in my Apprehension, is an Argument that his *digestive Juices*, tho' they have a dissolvent Quality, yet that their dissolvent Quality is of such a Nature, as not to be capable of dissolving the Cohesion of the Parts of *Cheese*, tho' it can well dissolve or digest most other Sorts of Aliment.

§. 1266. The like Remarks may be made concerning most Things used as Food. Some  
Persons



Persons can better digest animal Food, and a greater Quantity of it at a Meal, than others; the Reason of which is, that the dissolvent Quality of their *digestive* Juices is more strong, and active, and more suited to digest such Foods, than that of those others.

§. 1267. I may also observe, that some Persons can better digest *Beef*, than they can *Fowl*; the *brown*, better than the *white* Meats: They eat them with greater Pleasure, and find them set easier on their Stomachs, and themselves more alert after feeding on them, than if they had eaten so much *Veal*, or *Chicken*, which they dislike.

§. 1268. I apprehend, that in such Persons, (§. 1267.) the dissolvent Quality of their *digestive* Juices is of that peculiar Nature, that they dissolve more easily the brown than the white Meats; as Water will dissolve Gums, Sugar, and Salt, better than it can dissolve resinous Substances.

§. 1269. Such Persons (§. 1267.) therefore, in my Opinion, should rather eat of the *brown* than *white* Meats: It seems to me a prudent general Rule for Persons, as much as they can, to suit their Food to the  
Nature

Nature of the dissolvent Quality of their own *digestive Juice*: And they may know how to do this, by observing what Sorts of Aliment agree best with them; set easiest in their Stomachs; pass the common Course of the Chyle most pleasantly, and are freest from any consequent Inconvenience.

§. 1270. Many Persons in the Course of Life come to be fond of some Sorts of Aliment, which for several Years they were indifferent to; and fall into a Dislike of others, which formerly they delighted in: The Reason of this, as I apprehend, is an *Alteration*, which some how has happen'd in the Nature of the dissolvent Quality of their *digestive Juices*, which, as an INSTINCT, prompts them to choose the Food, which they used to refuse; and to refuse that which they used to prefer.

§. 1271. This *Instinct* they should follow, if they would suit their Aliment to the present State of their Constitutions.

§. 1272. It may deserve Consideration how that Sensation we call *Hunger* is excited, and how the *Appetite*, and *Digestion*, come to be depraved.

§. 1273. HUNGER seems to come on in  
the



the following Manner, *viz.* That as the *dissolvent*, or *digestive* Juices are continually flowing into the Stomach, so (as the Stomach becomes empty of the Aliment, that had been received into it) they stimulate, or act upon the Extremities of the Nerves terminating in the internal Superficies of the Stomach, the Perception of which is *Hunger* ; and the more empty of Aliment the Stomach happens to be, and the more pungent the Particles of the *digestive* Juices are, the sharper is the Hunger.

§. 1274. This Sensation of Hunger is removed by receiving into the Stomach sufficient Supplies of fresh Aliment ; because thereby the digestive Juices are absorbed ; and therefore the stimulating Action on the Extremities of the Nerves ceases, till the Stomach becomes again empty.

§. 1275. The APPETITE becomes *depraved*, when the *Quality* of the *digestive* Juices happens to be depraved : If that becomes very acrimonious and stimulating, there comes on a voracious, *canine* Appetite.

§. 1276. The DIGESTION becomes *bad*, either, 1. When the *digestive* Juices are not secreted



secreted in sufficient Quantity ; or, 2. When (tho' the Quantity of them be sufficient, yet) they are inert, or at least there is an Abatement of that dissolvent Quality, which naturally is in them.

§. 1277. In both these Cases (§. 1276.) there will be a Loss of Appetite, more, or less ; and Persons, in such a State, will not be able to eat their customary Quantity of Food, nor well to digest what they eat ; that is, their *digestive* Juices will not be able *sufficiently* to dissolve the Parts of the Aliment taken into their Stomachs, or render them minute enough to serve the Occasions of the Body.

§. 1278. The Effects of such an *insufficient* DIGESTION, (§. 1277.) Dissolution, or Comminution of the Parts of the Aliment, daily received into the Stomach, will be a Deficiency in the Reparation of the Waste of the Solids, and Fluids of the Body ; likewise Obstructions in the smallest Vessels (from the Bulk of some Particles of the ill, or insufficiently digested Aliment ;) a Deficiency both in the Quantity, and Quality of the Secretions ; a *Cacochylia* ; and various *chronical* Diseases ; and sometimes acute Fevers following

following that extreme Stomach-sickneſs, we call a *Surfeit*.

§. 1279. The Conſideration of theſe Things may help us to underſtand, what are the *Indications* of Cure, when the APPETITE is *depraved*, or *abated*, or *loſt*, and the DIGESTION *inſufficient* for the Wants of Nature; and may convince us of the Importance of obſerving the Rule laid down, (§. 1257.) of chuſing to eat of thoſe Sorts of *Food*, whether *vegetable*, or *animal*, which by Experience, we know will beſt agree with our Conſtitutions of Body.

§. 1280. For altho' Fiſh, on the Account of the weaker Cohesion of their Parts, may more eaſily be digeſted in the Stomachs of ſome Perſons, than *Fowls*; and *Fowls* for the like Reaſon, more eaſily digeſted than *Fleſh*; and the *white*, and the *young* Fleſh, for the ſame Reaſon, more eaſily digeſted than the *brown* and *adult*; yet as for thoſe Perſons in whom the *difſolvent* Quality of their *digestive* Juices, is of that peculiar Nature, as to be capable of well digeſting *Fleſh* of the *brown*, and *adult* Sorts; but not capable of digeſting well the *white Meats*, or *Fiſh*; if they feed on the *brown Meats*, they will  
enjoy



enjoy the happy Fruits of a *good* Digestion ; but if they live on the *white* Kinds of *Flesh*, or on *Fish*, they will fall under the ill Effects of a *bad*, or insufficient Digestion.

§. 1281. There is in the Nature and Oeconomy of our Bodies, a Necessity of having a considerable Part of the *Aliment* we take into our Stomachs, assimilated, or transmuted into the Nature of our Fluids, and Solids, in order to the Continuance of our Subsistence in Life ; and to this End it seems as necessary that the Parts of the Aliment we take, be sufficiently dissolved or reduced to a certain Degree of Minuteness ; which shews the Importance of observing the Rule recommended, §. 1257.

§. 1282. General RULE IV. *Use no Sorts of Aliments*, (tho' they have a Quality dissolvent of the *Stone*, and are capable of altering, and evacuating the *gouty* Humour) *which occasion Pain in the Stomach, or Bowels, or Kidneys, or Ureters, or Neck of the Bladder, or in the Joints, or in any other Part of the Body ; or which happen to disagree with the Stomach.*

§. 1283. The Fitness and Importance of this Rule (§. 1282.) will appear, if we consider that such Aliments (§. 1282.) besides their *dissolvent*, have a *stimulating* Quality, whereby



whereby they may produce Effects very troublesome and hazardous ; tho' they can contribute nothing to the Increase of the *Stone*, or *gouty* Humour, but rather to the Diminution of them.

§. 1284. The Reasons against taking Things strongly stimulating in Cases of the *Stone*, (§. 990, *ad* 996.) shew the Imprudence of using any Sorts of Aliment, which we by Experience find will occasion Pain, how pleasing soever they may be to our Palate. There is a great Variety of Sorts of Aliment proper for the Cure of Persons afflicted with the *Stone*, or *Gout* ; so that if some of the Things recommended in these Papers happen, in some Constitutions of Body, to excite Pain, or disagree with the Stomach, there are others that will not ; which therefore should be preferred, and used.

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## C H A P. XXII.

*Containing the Rules of Diet to be observed for dissolving the Stone either in the Kidneys or Bladder, and for preventing the Returns of the Gout ; with Directions in regard to different Constitutions, and Habits of Body, and incidental Symptoms.*

§. 1285. **I** Am now to lay down RULES of DIET ; in the due Observance of which, Persons afflicted with the *Stone*, or *Gout*, may with the divine Blessing, become free from them ; and the cardinal Point here is, to make so much Use of those Sorts of Aliments, which by Experiments have been found to contain a *Quality dissolvent* of the Stone, as that a *Quality dissolvent* of the Stone may be continually communicated to the Urine of Persons afflicted with it ; and as that the Nature of the *gouty* Humour may be altered,  
and

and its morbid Particles excreted from the Body.

§. 1286. This principal Indication, with the other important Intentions before mentioned, (§. 1235, &c.) I shall keep in View, and endeavour that the Directions about Diet may be manifestly subservient to them; which I propose to give distinctly as to the three usual Meals of *Breakfast, Dinner, and Supper.*

§. 1287. I. As to BREAKFASTS.

Rule. *Always make these Morning Meals on such light Aliments as will contribute to the Cure both of the Stone, and Gout.*

§. 1288. There is a great Variety of Things endowed with a suitable *dissolvent*, and *alterative* Quality proper for these first Refreshments of our Bodies; out of which every one may chuse that which will best suit their Cases, and Constitutions; and I propose the following as conducive to the Ends we are pursuing.

1. *A Mess of Cow's Milk made warm, and crum'd with Bread.* This will be very proper *Food*, both because the Milk has a Quality dissolvent of the Stone, (*vid.* §. 288,



841.) and Bread in like Manner. *Vid.* §. 246.

§. 1289. This Sort of Aliment (§. 1288.) is likewise fit for Supper as well as Breakfast; and, in some Cases, Persons may live wholly, and only upon it, to their great Advantage. The Experience of several has proved it beneficial in Cases of the Gout; and I may say, that the Events of the Experiments I have made with Bread, and with Milk, shew the *Milk Diet* is like to be as profitable against the *Stone*.

§. 1290. MILK is a Kind of Aliment most universally proper; suited almost to all Constitutions, as well as to all Ages, from the first Beginnings of Life, to the extremest old Age; and is suited to answer a Variety of Purposes, both on the Account of its *nutritive*, and *medicinal* Qualities; and would be much more beneficial, if it was more used. But many adult Persons look'd on it as fit only for Infants, and Children.

§. 1291. It may be doing some *Good* to remove the mistaken Apprehensions of such Persons, and set this Sort of Diet in a true Light; and therefore I hope the Publick will

will excuse my observing a few Things for this Purpose.

§. 1292. The MILK of Cows, (which is the Thing I am speaking of) as well as that of other Animals, is a Fluid partly of a *vegetable*, and partly of an *animal* Nature.

§. 1293. It (§. 1292.) is partly of a *vegetable* Nature ; for it contains, in a great Measure, the *saline*, and *oily* Particles, and very much the *specifick* Qualities of the *Grass*, and other *Herbs*, which the Cows feed upon : And as the Fields abound with medicinal Plants, and Flowers, which these Creatures promiscuously eat, (as the Bees gather Honey from every Flower) so Milk may in some Sense be reckon'd a Sort of *liquid Honey* ; or a natural *Elixir* of the Herbs from which it is made.

§. 1294. That MILK contains much of the *specifick* Qualities of those Herbs, which the Cows eat, I think, may justly be infer'd from the *Garlick* Taste, which Milk has, when the Cows are at Pasture in Fields, where the *Crow*, or *wild Garlick* grows, and they feed on it. Other Things likewise communicate a sensible Taste to Milk, as *Turnips*, and the *fallen Leaves* of Trees

in Autumn, which impart a Bitterness to it, easily tasted in the Milk, and in the Butter made from it: Thus, when a Water, distilled from any *Herb*, and when the Infusion of any Herb has plainly the specifick Taste of the Plant distilled, or infused, we rightly conclude such *Water*, or *Infusion* has much of the specifick Properties of it.

§. 1295. That the common Herbage, the Cows live upon, does not communicate to the Milk sensible and distinguishing Tastes of the particular Plants, which compose it, may be, because their sensible Qualities are not so strong; and therefore the Mixture of the different Herbs, produces that blended, grateful Taste, and Flavour, which is perceived in Milk just taken from the Cow. Thus it happens in Honey, which partaking of the specifick Qualities of the many different Flowers from which it is collected, has a blended, and neutral Taste.

§. 1296. From what has been observed (§. 1293, 1294, 1295.) I imagine it appears very probable, that the specifick Qualities of the Herbs on which the Cows feed, do in some Measure pass into the Milk. I grant that the different Herbs, fed upon, have  
different



different specifick Qualities; and that the Qualities thence resulting in the Milk, may be *neutral*; and therefore, that the medicinal Effects of Peoples feeding on Milk, can only be known by Experience, and the Observation of them, as they occur.

§. 1297. I observed (§. 1292.) that MILK is a Fluid partly of an *animal* Nature. This, I think, will be evident, if we consider the large Quantities of animal Juices secreted from the Blood of the Cows, and mixed with the Aliment they take into their Stomachs: The *Saliva* of these Creatures, the Humours secreted by all the Glands emptying their Fluid into the Cavity of the *Oesophagus*, and Stomach; and the Secretions by the Liver, the *Pancreas*, and intestinal Glands, make an important Part of their Chyle, before it passes into their Blood. What the Blood of these Animals may contribute to the Milk, before the Secretion of it by the lacteal secretory Vessels and Glands of their Udder, I will not pretend to know. What has been observed, proves, I think plainly enough, that Milk is partly of an animal Nature.

§. 1298. Now Milk being a Fluid elaborated

rated from such different Substances as the vegetable and animal, must have *neutral* Qualities ; the Virtues, and Efficacies of which are deducible from the Effects produced by this Sort of Aliment in those that use it.

§ 1299. Only I may here observe, that Milk is VEGETABLE ALIMENT *digested*, (by the Cow from which it is taken) and prepared for the important End of Nutrition ; and consequently the most proper Sort of *Food* for those Persons, whose *digestive* Juices are inert, and in a Manner destitute of that dissolvent Quality, which ought to be in them ; who have lost their Appetites, and have, as we say, weak Stomachs.

§. 1300. MILK may be exceeding useful to such Persons, (§. 1299.) not only on Account of the Ntriment it yields, for repairing their Waste, and recruiting their Strength ; but on the Account of its being endowed with a *dissolvent* Quality ; a Quality so active, as to be able to dissolve human *Calculi* ; by Means of which it may contribute to the Restoring a dissolvent Quality to the digestive Juices of such Persons,  
and



and thereby to the Recovery of their Appetite, and Digestion.

§. 1301. I have often advised it for such Persons, (§. 1299.) to their unspeakable Advantage: But I advise it to be taken only *Blood-warm*, because boiling the Milk alters the Nature of it, and renders it in some Measure *adstringent*; according to the Observation of *Diascorides* (a); and consequently improper where Adstringents are improper; and should not be used by Females under a cachectick, or obstructed Habit of Body: But Milk only *Blood-warm* they may use to Advantage; and if Bread be added to it, the Diet will be more dissolvent, and deobstruent. I may add, that if the Milk be boiled, it is a most suitable and beneficial Diet in consumptive Diseases.

§. 1302. I may also observe, that Experience has proved it to be of great Service in the Case of *Epilepsies*: I have known several epileptick Persons, some who have taken it by my Advice, and some by the Advice of

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(a) ἐψηδὲν δὲ πᾶν γάλα στεγνωπικὸν γίνεται κοιλίας.  
Diascorid. lib. 2. cap. 75.



others, who have found great Benefit by it : Whence I think we may infer, that it is proper *Food* for Persons of weak Nerves, low Spirits, and liable to some Kinds of convulsive Disorders.

§. 1303. *Hippocrates* indeed thought *Milk* hurtful for Persons afflicted with Pains of the Head, or acute Fevers, (a) and after him *Celsus* was of the same Opinion (b) ; one Reason of which to me is pretty obvious, viz. because it render'd the sanguine Vessels too full, by not passing off thro' the excretory Ducts so quickly, as a more thin, and aqueous Aliment.

§. 1304. But tho' the Use of Milk is not proper in every Case ; yet the Efficacy of it for curing the *Gout* has appeared in several Instances. We have an Account of one in the *Miscellanea curiosa* from *Dolæus* (c).

(a) Γάλα δίδναι κεφαλαλγέσι κακόν· κακόν δε καὶ πυρεταίνεσι. Hipp. Aph. Sect. V. Aph. 64.

(b) *Lac quoque, quod in capitis Doloribus, & in acutis febribus — pro veneno est ; in Phthisi tamen — recte dari potest.* Vid. A. C. Celsi de Medicin. Lib. p. 170.

(c) Vid. *Miscellan. curios. Obs.* 58. *Frankfurt. & Lipsiæ*, 1677.

And in another Volume of those Miscellanies, we have a Relation of a Man, who being quite weary of all Medicines, choose Milk for his common Drink, with suitable Diet; and by the continued Use of it, within the Space of a Year, received so much Advantage, that in all that Time he was free from the Gout (a).

§. 1305. A great deal more might be said of the Virtues of this Aliment, but what has been observed may be sufficient for my present Purpose: But some Persons have objected to the Use of Milk, that they think *it will breed Phlegm*, and therefore an improper Sort of Diet.

§. 1306. This Notion, (§. 1305.) is entirely groundless, and arises from the Want of knowing the true State of Things in those Bodies that are troubled with a *viscid Phlegm*, and the real Nature of Milk.

§. 1307. That which is called *Phlegm* in

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(a) *Tandem omnium medicamentorum pertæsus, lac elegit pro potu ordinario cum conveniente diætâ, à cujus usu continuo intra anni spatium tantopere refocillatus est, ut toto illo tempore nullum amplius paroxysmum podagricum senserit. Vid. Miscellan. curios. Obs. Norimbergæ, 1684.*



human Bodies, is a Sort of watery, lymphatick Humour, always secreting from the Blood; wholesome, and useful, when in a due Quantity, and of a right Quality, and is always thin while Persons are in Health: But when they catch Cold, and the Discharge by insensible Perspiration is diminished, the lymphatick Humours are then secreted by some Glands in a much larger Quantity than usual. Sometimes the unusual Discharge runs off at the Eyes, and Nose, in the Form of a clear Water; sometimes by the Glands in the Throat, and Parts adjacent, and occasions a tickling vexing Cough; and sometimes by other Ways; but still like a pretty clear Water, while the Blood does not deviate much from its healthful State. Indeed, when the Blood and Lymph become very viscid; and when the Evacuation by insensible Perspiration is much less than it ought to be, then the lymphatick Humours secreted *ad intra*, become viscid, and clinging; very troublesome, and difficult to be expectorated.

§. 1308. Those Things, therefore, can only, with any Propriety of Speech, be said



to breed *Phlegm*, (that is, to render it *viscid* ; or the Quantity secreted *ad intra* too large) which diminish the Discharge by insensible Perspiration, and render the Blood viscid, and the animal Fibres and Vessels lax and weak : None of which can justly be imputed to *Milk*, on the Account that it is a Sort of Food most easily digested, and its excrementitious, and superfluous Parts easy to be evacuated from the Body, after it has yielded the wanted Nourishment.

§. 1309 The Basis of *Milk* is the pure Element of Water : It is Water impregnated or mixed with the Particles of *vegetable*, and *animal* Substances ; with some *alkaline*, and more *acescent Salts*, and *Oils* ; and the most cohesive Parts of it are those, which make up the Substance of *Butter*, and *Cheese* ; and therefore they who object against eating Milk, may more strongly object against eating Cheese, and Butter. For the Water, which makes by far the greatest Part of Milk, will dilute, but not thicken, or render viscid the animal Fluids.

§. 1310. I have taken Notice of these Things, to remove the groundless Prejudices, which some Persons have entertain'd  
against

against Milk ; one of the most innocent, and beneficial Sorts of Aliment, which divine Providence has provided for us.

§. 1311. BUT others, it may be, will say, that *Milk* does not agree with them ; it turns *sower* in their Stomachs. If this is the Case, their Stomachs are not in a right State ; and therefore, as there are Remedies proper to bring their Stomachs to agree with this wholesome Food, they will act prudently in desiring their Physician to advise for them to this Purpose.

§. 1312. 2. BREAD and *Butter*, with GREEN TEA, (made by *boiling* the Leaves of it according to the Way of the *Japanese*, (§. 926.) sweetned with *Honey*, or *Sugar*, to the Palate, is another Sort of suitable Aliment for Breakfast in Cases of the Stone, and Gout.

§. 1313. As I have (§. 1312.) recommended *Honey*, and *Sugar*, I shall briefly observe a few Things concerning their Nature, and Virtures, which may guide Persons in the Use of them.

§. 1314. 1. HONEY is a Substance collected by BEES from a great Variety of Flowers, and consists of vegetable *Salts*, and *Oil*, and an *acid Spirit* separable from it by  
chymical



chymical Distillation. It is of a *saponaceous* Nature; very attenuating, and detergent; and, by Means of these Qualities, conduces much to preserve Persons, that are in Health, from Obstructions, those Impediments both of insensible Perspiration; and of the sensible Excretions. It is likewise useful to remove Obstructions, when they have happen'd, and to recover and increase the natural Evacuations from the Body; when by any incidental Occasion they have been render'd less in Quantity than they ought to be. There is hardly any one Thing, among all the Particulars used as Aliment, more conducive to the Preservation of that Health, which is enjoy'd, or to recover Persons from a morbid Habit of Body; and it should be remember'd, that it has in some Measure a Quality dissolvent of the Stone. *Vid.* §. 165.

§. 1315. The all-wise, and gracious God chose *Canaan* for the Habitation of his peculiar People, as it was a plentiful Country, *a Land* flowing, or abounding *with Milk and Honey*, (*Exod.* iii. 8, 17.]. And He mentions these Blessings as Motives to Obedience unto him, who provided so well for them, *Levit.*



*Levit.* xx. 22, 24, 26. And if more Use was made of these Aliments, I am persuaded, many People would enjoy better Health, and more Chearfulness.

§. 1316. 2. SUGAR is a Substance consisting of the *Salts*, and *Oil* of the Plant that yields them, and has much the Nature of a Sope. Dr. *Boerhaave* calls it the *purest Sope* (a). When it is diluted with some aqueous Liquor, and drank, it has an Aptitude to mix with any slimy Humours, that may happen to adhere to the Sides of the animal Vessels, to disunite their cohesive Particles, and dislodge them, and thus serves to cleanse the Coats of the Vessels, and remove Obstructions.

§. 1317. Dr. BOERHAAVE, from the Aptitude and Efficacy of *Sugar* in mixing with, and dividing the component Parts of Oils; very justly deduces the Virtue of it in human Bodies; observing that diluted with animal Liquors, it makes a Sort of *saponaceous Lixivium*; which, by the Action of

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(a) *Ita Saccharum, quod est sapo purissimus, vel Salvere essentialis oleosus, &c. Vid. D. Boerhaavii Element. Chæmiæ, Vol. 2. p. 138.*

the vital Organs, dissolves *oily*, and *viscous* Humours; that it neither increases, nor is converted into *Bile*, but is aperitive, attenuant, and dissolvent; and that by too much dissolving the oily Parts of the *Blood*, (that is, if taken to Excess) it may occasion *Leanness* (a): I may add, that therefore the Use of *Sugar* is very proper for Persons that are *too fat*.

§. 1318. SUGAR indeed taken to Excess may do Harm, as drinking too much Water, or eating too much Fruit; or any other Thing in too large Quantities may produce morbid Effects; but used temperately, and in proper Cases, there are not many Things more beneficial; and, as it is an *acescent* Sort of Aliment, it contributes to lessen and remove the Causes, on which both the *Stone*, and *Gout* depend.

§. 1319. I have recommended, (§. 1312.) for Persons afflicted with these Distempers,

(a) *Inde & scitur virtus Sacchari in corpore humano; ubi latice naturali dilutum, lixivium præbet saponaceum, quod oleosa, viscosa, vi vitæ adjuvante dissolvit. Nec bilem auget, aut in illam convertitur, sed aperit, attenuat, dividit. Interim tamen olea nimis solvendo macilentiam inducere potest. Vid. ibid. p. 139.*



the making TEA by pouring *boiling Water* on the *Leaves* of it, and boiling them some Minutes, because the Tea made in our common Way by a hot Infusion only, has discover'd no Quality dissolvent of the *Stone*, (*vid.* §. 263.) and because the TEA made in the Manner propos'd, discover'd a Quality well capable of dissolving human *Calculi*. *Vid.* §. 917, 921.

§. 1320. I proceed now to mention some other Things proper for *Breakfasts*.

3. BREAD and *Butter*, with LIMONADE; or *River Water*, and the *Juice of Oranges*, *Seville*, or *China*, mixed in like Manner; or Water mixed with a soft *Cyder* (to the Strength of small Beer) and sweetned with *Sugar* to the Palate, for Drink, may be an agreeable Breakfast in the Summer-Season.

§. 1321. 4. The same EATABLES, (§. 1320.) or *Toast*, and *Butter*, with COFFEE (made by *boiling* it a sufficient Time) mixed with *Milk*, and sweetned to the Palate, may be sometimes a suitable Breakfast.

§. 1322. 5. CHOCOLATE mixed with *Milk*, and sweetned to the Palate, with a Slice of toasted Bread broke into it, may be another Sort of Breakfast. Or,

§. 1323.



§. 1323. 6. Coco (made by a sufficient decocting of it) mixed with Milk, and sweetened, with a Slice of toasted Bread broke into it. Or,

§. 1324. 7. A MESS of *Bread-Gruel*, with two or three Spoonfuls of *white Port Wine*, or of a soft *Cyder*, and sweetned to the Palate. Or a Mefs of *Mallow Gruel*, because it has a dissolvent Quality; (*vid.* §. 527.) or of *Oatmeal Gruel*, for the same Reason, (*vid.* §. 539.) And on the like Account GRUEL made with *Pearl Barley*, (*vid.* §. 546, 547.) or with *Rice*, (*vid.* §. 558.) will be suitable Aliment for Breakfast.

§. 1325. I may observe, that in this Variety of Things mention'd for Breakfast, every Particular, has more or less, a Quality dissolvent of the *Stone*, and conducive to remove the Cause of the *Gout*, except the Butter: But in the Choice of the Aliments recommended, the Observance of the following Rules may be of Service.

*Rule 1.* When the WEATHER is *hot*, and the Temperature of the Air *too dry*, then make your Breakfast on what is proposed, §. 1288, or §. 1312, or §. 1320.

*Rule 2.* When the WEATHER is *cold*, or

*rainy*, and *too moist*, choose either what is recommended, §. 1321, or one of those in the following Sections.

*Rule 3.* Persons of a *sanguine* Constitution, hot, and cholerick, whose Flesh is firm, and Vessels too tense, should choose for Breakfast a Mefs of Milk, or of any of the Gruels mentioned, acidulated with the *Juice* of *Oranges*, or *Lemons*, and sweetened to the Palate; or *Bread* and *Butter*, with *Green Tea*, acidulated with one or other of these Juices; or *Limonade*, for their Drink.

*Rule 4.* Persons of a *cold* Constitution, with a Blood *too watery*; whose Flesh is *flabby*, Fibres *too lax*, and who are habitually *chilly*, should prefer *Coffee*, *Chocolate*, or *Coco*, with a Slice of toasted *Bread* broke into a Mefs of it, after it has been rub'd with a Nutmeg; because each of them has a Quality conducive to contract the Fibres of the animal Vessels, and increase the Evacuation of the most watery Parts of the Blood thro' the excretory Ducts.

*Rule 5.* Persons that are *too lean* should chiefly choose *Milk*, with *Bread* not toasted, or *Chocolate* with *Milk* and *Bread*, and but  
very



very little Sugar; or *Rice*, or *Bread*, or *Pearl Barley Gruel*, with an equal Part of *Milk*; and be very sparing in the Use of *Sugar*, *Honey*, and *vegetable Acids*: And as I recommend CHOCOLATE to *lean* People, I would observe, that it is a proper Diet for such as are in *Consumptions*. Mr. RAY cites a remarkable Case of a *consumptive* Person, whose Condition was deplorable, almost beyond all Hope, who was recover'd to his Health, and Strength, by a daily drinking of this Liquor (a).

*Rule 6.* Persons that are *too fat* should make their *Breakfasts* on *Green-Tea*, *Coffee*, or *Coco*, pretty much sweetned with *Sugar*, or *Honey*, with toasted Bread, or Bisket, dry, or fopp'd in it; and use no Butter, and very little Milk, at their Breakfasts; or dry *Bread*, *Seed Cake*, or *Bisket*, with *Limonade*, or *Cyder*, and *Water* in the hot Weather of Summer.

§. 1326. DINNERS are in the next Place

(a) *Phthisicus fere deploratus robori suo, & sanitati restitutus erat præter omnem spem à quotidiano usu nuncum Cacao, seu Potionis Chocolatæ.* D. Mundy in lib. de potulentis. Vid. RAY Hist. Plant. p. 1673.



to be contrived, both as to the *solid*, and *liquid* Part of them. There is a vast Variety of Materials for these principal Repasts; and it might make a large Volume to animadvert on the several Particulars used either for Nourishment, Refreshment, or Delight: I shall therefore pretty much confine myself to those *Eatables*, and *Drinkables*, which have discover'd a Quality conducive to the Cure of the painful Distempers under our Consideration: And begin with the *Eatables*; only I would premise the following Rules, *viz.*

RULE 1. *That Persons very much afflicted either with the Stone, or Gout, do totally leave off every Sort of animal Food, till they are perfectly recover'd from their Distemper.*

I do not however advise them to leave it all at once, but propose their doing so by Degrees; gradually lessening the Quantity of their animal Food every Week, and allowing themselves three Months for accomplishing a total Abstinence.

RULE 2. *That all, who have either Stone, or Gout, though they continue the Use of animal Food, yet should lessen the*

*the Quantity of it, till they come to make eight, six, or four Ounces, the Proportion of the animal Food they customarily take at their Dinners.*

§. 1327. And as for what particular Sorts of *animal Food* they should eat, whether of *Fish, Fowl, or Flesh*, boiled, or roasted; I think it best that every one should choose for themselves, they having a Regard to general Rule III. §. 1257, and remembring that young Meats, *cæteris paribus*, are more easily digested, than the old; the white, than the brown; and that those Animals are preferable as *Food* for us, which have lived only on Vegetables.

§. 1328. Having observed these Things, (§. 1326, 1327.) I proceed to consider what EATABLES may be used at DINNER with Advantage against the *Stone*, and *Gout*; and here I must propose the following general Rule, *viz.*

RULE. *Make some, or other of those Things, which by Experiments have been found to possess a Quality dissolvent of human Calculi the largest Part of this principal Meal,* §. 1326.



§. 1329. I would therefore in Correspondence with this Rule, recommend the following Things; some or other of which to be the FIRST Part of the Dinners, *viz.* *Bread Pudding* plain, or with *Currants*; *Rice Pudding* plain, or with *Currants*; *Flower Pudding* with *Currants*; *Puddings* made with *Oatmeal*, or *Pearl Barley*, either plain, or with *Currants*; *Apple Puddings*, or *Apple Dumplings*; *Currant Fritters*, or *Apple Fritters*.

§. 1330. For the SECOND Part of the Dinner, may come in the *animal Food*; the Sort of which is left *ad libitum*, but a large Proportion of some Vegetable, *boiled*, or *raw*, should always be joined with it; and, I think, with *Fish*, and *Fowl*, as well as other *Flesh*.

§. 1331. The following VEGETABLES I recommend as proper to be *boiled*, and eaten with the animal Food at Dinner, *viz.* *Young Garden Radishes* boiled as young *Carrots*, *Asparagus*, *Lettice*, and *Cabbage*; *Savoys*, *Colliflower*, and *Brocoli*, on Account of their Affinity with Cabbages; likewise *Turnips*, *Potatoes*, *Onions*, and *Parsnips*.

§. 1332. I propose the boiling of the  
Garden,



*Garden-Radishes*, (§. 1331.) because the Quality dissolvent of the *Stone* is much more active in the *Decoction* of them, than in the *Juice*; and consequently, more active in the Liquor remaining in the boiled *Radishes*, than in the *Juice*; and because they eat well boiled, tho' they loose much of their Colour, and tho' the Taste of them be not so pungent, as when they are raw.

§. 1333. Of the other Things specified, *Asparagus*, *Turnips*, and *Onions*, abound most with the happy dissolvent Quality, and therefore should be prefer'd, or most frequently used. Dr. *Boerhaave* mentions a *German Physician*, who very much commended *Onions* against the *Stone*, and advised them with Success; and speaks of it as a known Thing, that *Onions* could dissolve it; and he observes that they are good in Cases of the *Dropsy*, *Scurvey*, and *Worms*, and for ripening of Tumours (a).

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(a) *A medico Germano contra calculum maxime laudatur, & cum successu adhibetur; notum enim est calculum a Ceba dissilire, hinc dicitur nullum melius est medicamentum ad frangendum calculum; in hydrope, scorbuto, lumbricis, & abscessibus maturandis est optima planta. Vid. Boerhaav, Hist. Plant, &c. p. 618.*

§. 1334. VEGETABLES proper to be eaten *raw* with the *animal Food* at Dinner, are the following, *viz.* Sallets of the small Herbs, *e. g.* young *Radish Tops*, *Mustard*, *Garden Cresses*, *Lettice*, *Sorrel*, and *Parsley*, making the three last of these to have the largest Proportion. These with *Vinegar*, or *Verjuice*, or the Juice of *Lemons*, or *Oranges*, and *Salt*, make suitable Sallets in the Spring-Season.

§. 1335. In the Summer *Silesia*, or *Cabbage Lettice*, or *Goss Lettice*, with *Vinegar*, or *Verjuice*, *Mustard*, and *Salt*, make an agreeable Sallet to be eaten with any roasted Meat; because they are endowed with a Quality dissolvent of the Stone, and are as proper against the Gout: And in the Winter *Cellery* with *Vinegar*, or *Verjuice*, and a little Salt, will make an agreeable Sallet, suitable to the Occasions of these Distempers; and may with great Advantage, be plentifully put into *Soops*.

§. 1336. CUCUMBERS only with *Vinegar*, *Pepper*, and *Salt*, make a suitable Sallet, and indeed an excellent Medicine thro' the Summer-Season, both against the *Stone*, and *Gout*.



§. 1337. Dr. *Boerhaave* reckons them, (§. 1336.) among the most suitable Aliments in Summer, on the Account of their refrigerating Quality, tho' he judg'd them improper when the *Blood* is *too thin* (a). He thought this Plant abounded with a nitrous Salt envelop'd with a thin Mucilage, which render'd it a good Remedy against inflammatory Diseases, *bloody* Urine, Pains of the Kidneys from the *Stone*; and to bring away *Gravel* (b).

§. 1338. Yet he did not approve eating the Cucumbers raw, apprehending they would not easily digest, because of a *Viscidness* in their Juice (c).

§. 1339. BUT that Cucumbers may be plentifully, and safely eaten, notwithstanding

(a) *Pulpa inter optima cibaria æstate recipitur, quia refrigeret—in nimia sanguinis tenuitate non convenit. Vid. Hist. Plantar. desumpt. ex ore H. Boerhaav. p. 521.*

(b) *Hæc planta abundat copiosissimo nitroso sale, tenuissima mucilagine tecto, — unde in omni morbo inflammatorio, mictu sanguinis, — dolore à renum calculo, & in expellendo sabulo pro optimo habetur remedio. Ibid. p. 522.*

(c) *Fruetus crudus non est adhibendus, quia ab phlegma viscosum non facile digeritur. Ibid.*

this



this Quality of the Juice, (§. 1338.) may be concluded not only from the Experience of that OFFICER in the *Guards*, whose Case has been related, (§. 1220.) but from the Experience of many, who eat two, or three, or more of them, only with *Salt* and Bread for a Breakfast, or Supper, without any Inconvenience: But *Salt* and *Vinegar* added to them, not only destroys the viscid Quality of their Juice, but renders them more effectual against the *Stone*, and *Gout*, and various other chronical Distempers: Indeed, eating *Oil* with them, prevents their being easily digested in the Stomach, and abates their Efficacy against such Diseases; which deserves the Consideration of those that love them.

§. 1340. DIASCORIDES represents them as beneficial to the *Bowels*, and *Stomach*, and as *cooling* (a): And Mr. RAY having mention'd the Opinion of one who thought them only fit for strong Stomachs, adds;  
 “ *But we who have not a very strong Sto-*  
 “ *mach, as leading a sedentary Life, have*

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(a) Σίχως ἡμεῖς εὐκοίλιος, εὐτόμαχος, ψυχρὸς. Vid. Dioscorid. lib. 2. cap. 163.

“ for many Years eaten Cucumbers plenti-  
 “ fully, so long as they were in Season, and  
 “ fit to to be eaten, and yet have not per-  
 “ ceived any, or the least Inconvenience  
 “ from so doing, altho’ we are now near  
 “ sixty Years old (a). I have taken Notice  
 “ of these Things to remove the Prejudices  
 some People have against this Sort of Ali-  
 ment, and to encourage them more freely  
 to eat of it, as being one of the best Dissol-  
 vents of the Stone.

§. 1341. I may add, that in the Winter  
 the *pickled Cucumbers*, both large and small,  
 may in some Measure answer the same Pur-  
 poses.

§. 1342. AFTER the *animal Food*, PYES,  
 or TARTS filled with *Codlins*, or other  
*Apples*, or *Pears*; or Tarts made with  
 any of the Summer Fruits; or scalded  
*Codlins* to be eaten with *Rose-water*, or  
*River Water*, or *Milk*, and *Sugar*; or stew’d

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(a) *At nos quamvis ventriculo non admodum robusto sumus, ut qui vitam sedentariam agimus, per multos annos cucumeres copiose ingessimus, quamdiu tempestivi fuerunt, & usui idonei, nec tamen ullum vel levissimum noxam aut incommodum inde sensimus, quamvis jam fere sexagenarii sumus. Vid. Raii Hist. Plant. p. 646.*



or baked *Apples* or *Pears* may be brought in for a THIRD Part of the Dinner, where there must be a Variety : But it is my Opinion, as well as the Judgment of other Physicians, that the fewer Sorts of Aliments are eaten at a Meal, the more conducive it will be to the Preservation of Health, and Recovery from *chronical* Diseases.

§. 1343. When *animal Food* is made a Part of the Dinner, to prevent too great an Increase of alkaline Salts in the Blood, I would advise the eating of some Fruit after it ; as *Strawberries, Cherries, Rasberries, Mulberries, Grapes, Apples, and Pears* in their Season : And it deserves to be remembered, that *Strawberries, Codlins, Mulberries, Grapes, Apples, and Pears* have discover'd (by Experiments made with them) a Quality strongly *dissolvent* of the *Stone* ; and from that Quality, and their *acid* Nature, we may rationally conclude they will be as effectual against the *Gout*.

§. 1344. Dr. BOERHAAVE had a very great Opinion of *Strawberries* : He thought them good against the *Gonorrhœa*, and an excellent Remedy in all acute Diseases ; and particularly in burning Fevers attended with  
extreme



extreme Thirst ; and directed a Liquor made with *equal Parts of the Juice of Strawberries, and Limons, and Spring Water,* mixed together, and sweetned with *Sugar* to the Palate, to be drank in Fevers ; and the *Seeds* of STRAWBERRIES he recommended as a *Dissolvent* of the *Stone* ; and directed the washing of the ripe Fruit in Water, (thereby separating the Seeds from the Membranes, and Substance which contained them) then to take the Seeds, which fell to the Bottom of the Water, and to give of those Seeds dried, from the Quantity of one Drachm to two, for a Dose, to be taken in *white Wine*, in the Morning fasting. This he recommended as an extraordinary Medicine for those that have been cut for the *Stone*, to preserve them from such Concretions (a).

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(a) *Semina* — est remedium calculum solvens, sumatur nempe fructus fragæ maturæ, & in aqua positus conquassetur, tum semina ad fundum decidunt, hæc exsiccata ad drachmam unam vel duas dari possunt hauriendum mane jejuno stomacho ex vino albo, hoc est summum medicamentum pro iis a calculo sectione liberatis, ne rocidivam patiantur. Vid. Boerhaav. Hist. Plant. p. 62.

§. 1345. Here I may observe, that if the dried Seeds of Strawberries have such a Virtue, (§. 1344.) the eating them in the Fruit ; or the eating the whole Fruit, Juice, Seeds and all, cannot be less efficacious.

§. 1346. II. I come in the next Place to consider what DRINKABLES may be proper at Dinner for Persons afflicted with the *Stone*, or *Gout*. There is a large Variety of these, which may be divided into two Classes, *viz.* the small, and the strong Liquors.

§. 1347. I. SMALL DRINKS proper at Dinner, are the following, *viz.*

1. LIMONADE made with the Juice of one *Limon* to a Pint of River Water, sweetned with Sugar to the Palate.

2. ORANGE WATER made with the Juice of one *Orange*, either *Seville*, or *China*, and a Pint of River Water sweetned with Sugar.

3. CODLIN WATER (made by boiling two Ounces of sliced Codlins in a sufficient Quantity of Water to a Pint) sweetned.

4. PIPPIN WATER (made by boiling a like Quantity of *Pippins*, of any Denomination, in a sufficient Quantity of Water to a Pint) sweetned to the Palate.

5. STRAWBERRY WATER, made by boiling  
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ing two Ounces of mash'd Strawberries in a sufficient Quantity of Water to a Pint, and sweetning the strained Liquor with Sugar to the Palate.

6. MULBERRY WATER, made in the like Manner.

7. HONEY WATER, made by dissolving, or boiling one Ounce of Honey a few Minutes in a Pint of Water.

8. FIG WATER, made by boiling two Ounces of sliced Figs in a sufficient Quantity of Water to a Pint, and acidulating the strained Liquor to the Palate with the Juice of *Oranges*, or *Lemons*.

9. RAISIN WATER, made as the *Fig Water*.

10. CURRANT WATER, made by boiling two Ounces of foreign Currants in a sufficient Quantity of Water to a Pint, and sweetening the strained Liquor with Sugar to the Palate.

11. ONION Water, made by boiling four Ounces of peeled, and sliced Onions in a Pint and half of Water till it comes to a Pint.

12. WHITE PORT WINE mixed with *Water* to the Strength of small Beer.

13. A SOFT CYDER mixed with *Water*



to the Strength of small Beer, and sweetened with Loaf Sugar to the Palate.

14. MILK, and *Water*, in those Proportions of one to the other, which the Person likes best, for whom they are mixed.

15. BARLEY WATER, with, or without *Milk*.

§. 1348. All these Liquors (§. 1347.) have more or less a Quality *dissolvent* of the *Stone*, and of the Cohesion of the Particles of the *gouty* Humours, and of altering their Quality; out of which People may choose that, which is most suitable to their Constitutions, and the Symptoms they are under; and to the Seasons of the Year, and Temperature of the Air.

§. 1349. SMALL, *malted*, BEER, tho' it contributes nothing to the Dissolution of the Stone, or Cure of the Gout; yet, as it neither contributes to produce, or increase these Distempers, it may sometimes be allow'd to Persons not much troubled with them, if they are very fond of it.

§. 1350. II. STRONG, or *spirituous* DRINKS fit for Persons afflicted with the *Stone*, or *Gout*, are the following foreign, or domestick Liquors, *viz.*

*Foreign*

*Foreign Wines.*

1. WHITE PORT WINE.
2. RED PORT WINE.
3. CANARY WINE.
4. MADERA WINE.
5. RHENISH WINE.

*Domestick spirituous Liquors.*

6. RAISIN WINE.
7. MULBERRY WINE.
8. CYDER that is *soft*, whether of *Herefordshire, Monmouthshire, Devonshire*, or any other Country.

9. PERRY, I mention, because the *Pears* I made an Experiment with, discover'd a Quality strongly *dissolvent* of the Stone.

10. MULBERRY BRANDY diluted with *Water*.

11. STRAWBERRY BRANDY diluted with *Water*.

12. PUNCH sweetned with *Honey*, or Sugar.

13. MEAD.

§. 1351. All these spirituous Liquors have more, or less a Quality *dissolvent* of the Stone.

§. 1352. ALE, or STRONG BEER may, sometimes, as well as small Beer, (§. 1349.)

be allow'd to Persons not much afflicted with the Distempers treated of; but it should be consider'd, that when they drink either of them, they substitute a Liquor, that can contribute nothing to their Cure, instead of one that has a Quality conducive to it.

§. 1353. Here I would observe, because it may be of Service, that *maltd* Liquors, and especially the stronger Sorts of them, are very *improper* for Persons subject to *Head-achs*, or to be *sleepy* after Dinner, or who lead sedentary Lives, on the Account of their *viscid* Quality, and the Obstructions often produced thereby.

§. 1354. I have advis'd several Persons troubled with these Disorders, (§. 1352.) to leave off all Use of malt Drink, and to take Water in the Stead of it; and by doing so, they have become entirely free from their Complaints.

§. 1355. However, for People of laborious Employments, *small Beer*, *Ale*, and *strong Beer*, are useful Liquors.

§. 1356. Having thus given an Account of a Variety of Things proper for Dinners, I shall lay down some RULES in regard to  
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the *Weather*, to the *Constitutions* of People, and their *Habits* of Body, fit to direct them in the Choice of *Eatables*, and *Drinkables* at these principal Meals.

§. 1357. I. AS to the WEATHER.

RULE I. If the Weather is *hot*, and the Temperature of the Air *too dry*, People should eat more freely of the *cooling* Sallets, *Cucumbers*, and of *Strawberries*, *Cherries*, and other Summer Fruits in their Seasons; because they *thin* the Blood, and *cool* the Body; and are excellent Means to prevent Fevers.

§. 1358. SULTRY WEATHER, or the Heat of the Air, when it increases to that Degree, which makes us say, it is *exceeding hot*; brings on *inflammatory Fevers* by *inspissating* the Blood; and therefore it is, that the Summer Fruits having a Quality of thinning and cooling the animal Fluids, are so suitable, and effectual Means of preserving those People from falling into Fevers in sultry Seasons, who eat sufficiently of them.

§. 1359. BUT yet Excess in eating Fruit should be avoided; because otherwise, tho' they prevent inflammatory Fevers, People

thereby bring on themselves FEVERS of another Denomination, and as fatal, *viz.* those of a *putrid* Kind, attended with *colliquative* Evacuations; or at least, long, and wasting *Loosenesses*, by dissolving that Consistence of the animal Fluids, which is necessary to Health. This shews the Indiscretion of those Persons, who observe no Bounds to the Quantities of Fruit they eat, but the Capacity of their Stomachs to receive no more.

§. 1360. The same Quantity of Fruit cannot be the proper Proportion for the Variety of different Persons, and their different Cases, some requiring more than others; but *two, three, or four* Ounces of *Fruit* twice a Day, appears to me a mean Quantity, sufficient for most People; They should eat Fruit daily, but more when the Weather is very hot, than when it is moderate or cold.

§. 1361. RULE 2. When the Weather is *hot*, and the Temperature of the Air *too dry*, People should drink at their Dinners more freely of the small Liquors recommended §. 1347, and more sparingly of those that are strong and spirituous; and be more moderate in the Use of Exercise.



§. 1362. RULE 3. If the Weather is *cold*, and the Temperature of the Air *too moist*, they should at Dinner lessen their Proportion of the *small* Liquors, and increase that of the *stronger* Sort; and keep their Bodies warm, in a perspiring Way, either by Means of Exercise, or by a Fire in the Room where they are employ'd.

## II. As to different CONSTITUTIONS.

§. 1363. RULE 4. If People are of *sanguine*, or *choleric* Constitutions, their Flesh firm, and Fibres fully tense, they should prefer, and chiefly use the Aliments, both *Esculents*, and *Potulents*, which best suit the hot Seasons; and drink more freely of the *small* Liquors, and more sparingly of the strong, than Persons of a contrary Constitution. They should drink of the *white-colour'd* Wines rather than of the *Red*; and chiefly of the *white Port*, and of the soft *Cyders*, or *Perry*, or *Mead*; and use *Vinegar*, or Juice of *Lemons* in their Sauces; and eat freely of *Cucumbers*.

§. 1364. RULE 5. If Persons are of *phlegmatick* Constitutions, have a *poor watery* Blood, *flabby* Flesh, *lax* Fibres, and are habitually *chilly*, they should use some Aromatics, as *Nutmegs*, *Cloves*, *Cinnamon*, or



*Pepper*, with their Aliments ; eat sparingly of the Summer Fruits, forbear *Cucumbers*, and the Use of the *acid small* Liquors, except the *Strawberry Water*, which is not only *diuretick*, but conducive to strengthen their Fibres : They should use no *Vinegar*, but *Verjuice* instead of it, with their Sallets, and in all their Sauces ; which is not only grateful to the Stomach, but proper against the Laxity of the animal Vessels ; and then for *small* DRINKS, they should take the *Onion-Water*, or *red Port Wine* mixed with *Water* to the Strength of small Beer : And their *strong* Liquors should be *red Port Wine*, *Madera Wine*, *Rhenish Wine*, the strong and rough Sorts of *Cyder* ; *Strawberry Brandy* reduced to the Strength of Wine, by adding a sufficient Quantity of Water to it. People of this Class should drink more Wine, or other suitable spirituous Liquors, than they of the former, (§. 1363.) can with Reason allow themselves.

§. 1365. I must add, that all *malt Liquors* are improper for this Sort of People, (§. 1364) on the Account of the Obstructions they may

may produce, and that they will increase the Laxity of the animal Vessels.

III. As to different HABITS of Body.

§. 1366. RULE 6. Persons that are *too lean*, should make less Use of *Sugar, Honey*, and the *acid Dissolvents* of the Stone, than others; and prefer the Dissolvents of different Qualities, as *Onions, Leeks*, and *Turnips*, &c.

§. 1367. These (§. 1366.) often have keen Appetites, resulting immediately from a peculiar *Acrimony* in their Blood, which renders the dissolvent Quality of their *digestive* Juices, *too* strongly dissolvent; whence it happens, that there is too strong an Appetite to *Food*; and, as I apprehend, that the Parts of the Aliment eaten are too much digested, or dissolved; that is, are more subdivided, than they ought to be; or reduced, if I may so express it, to a greater Minuteness, most of them, than is consistent with their Stay in the Body, and Transmutation into the Substance of its Fluids and Solids: Whence it is, that being too much comminuted, they are carried out of the Body, thro' the perspiratory, and other excretory Ducts.

§. 1368. Persons under this Habit of Body,



dy, (§. 1366.) may perhaps obtain a happy Alteration of it by a regular Observance of the following Directions, *viz.*

1. To drink *Milk*, or *Water*, (in which the *Roots*, or *Leaves* of *Marsh-mallows*, or *Leaves* of the common *Mallow* have been boiled, till the *Water* feels glibby, or like a thin Mucilage) with an equal Part of *Milk*, for their small Drink at Dinner, if *Milk* agrees with them.

2. To abstain from *Wine*, *Cyder*, and *Perry*, and instead thereof, (if they are not much troubled with the *Stone*, or *Gout*) to drink a *smooth soft Ale*, or *good Brunswick MUM*, for their strong Drink; when they have Occasion for some spirituous Liquor.

3. To use *Oil* with their Sallets, and *Butter* in their Sauces; and when they eat *animal Food*, to choose the fattest; because these conduce to abate the Acrimony of the Blood, and are most easily transmuted into *animal Fat*, in those that feed on them.

§. 1369. RULE 7. PERSONS, that are *too fat*, at their Dinners, should very much abstain from those Aliments, both *Eatables*, and *Drinkables*, which in the Course of the animal



mal Digestion may most easily be assimilated or transmuted into animal Fat; and from those also, which may otherwise produce a Repletion of the Body.

§. 1370. Such Persons (§. 1369.) therefore may happily find the Quantity of their Fat, and the Bulk of their Bodies to abate, by observing the following Directions, *viz.*

1. To abstain from the Use of *Oil*, in their Sallets, and of *Butter*; and from eating the *Fat* of *animal Food*.

2. To drink no *Milk*, or *malted Liquors*.

3. To choose *Fish*, or *Fowl*, or the other *white* Meats, and *Mutton*, rather than other Sorts of Flesh, at Dinner; because, as I apprehend, the Additions, or Recruits, which the Body obtains by feeding on these, are not so abiding in it, as those, which are obtained from other Kinds of Flesh.

4. To use some, or other of the *acid* small Liquors; or *Water* sweetned with *Honey* for their common Drink.

§. 1371. 5. There is yet another Direction I would give Persons that are *too fat*; and that is, to diminish the Quantity of

of their daily Aliment : For if they sufficiently lessen the Quantity of their Aliment, they will sufficiently abate the Quantity of their Fat, and decrease the Bulk and Weight of their Bodies ; and become free from those Disorders, which are the Effects of their Corpulency, or *too much* Fat ; and likewise be secure from the various, (and, many of them, fatal) Distempers to which that State of Body renders them obnoxious.

§. 1372. The METHOD I propose for their doing this, is to continue two or three Days living in their customary Way ; and each of those Days, to have weighed, and set down in Writing the Weight of every Thing they eat and drink ; and each Night to make a Total of the Quantities they received into their Stomachs the preceding Day. Thus they will find what is the Quantity of their daily Aliment : Supposing then, that the mean Quantity of the daily Receivings into their Stomachs be four Pounds, then let them begin to abate that Quantity ; and the first four Weeks only lessen it half a Pound a Day ; and in this Manner, *viz.* Let their Breakfasts be two Ounces less, their  
Dinners



Dinners four Ounces less, and their Suppers two Ounces less than usual.

§. 1373. This Abatement of an eighth Part, as I apprehend, is so moderate, as will not be discernable half an Hour after each Meal, any otherwise, than by a greater, and more general Easiness of Body, and Liveliness of the Spirits; yet in the first Month of this Alteration, the Person will have received fourteen Pounds less of Aliment than he used to take, in that Space of Time; which will occasion a Diminution of his Weight.

§. 1374. Here I would advise Persons, who resolve to use this Method, to be weighed before they begin it; and at the End of every Month; and to keep in Writing an Account of their Weight every Time, and of the Days when they are weighed; which will direct them more exactly to regulate the Quantities of Aliment to be abated. For I should not desire an *over-fat* Person to loose more than three Pounds *per Month*.

§. 1375. The *second Month* I would advise the Abatement of another *half Pound* of their common daily Quantity of Aliment; which



which makes it one *fourth* Part less than they used to take before they begin this Method. And I propose that they continue this diminished Quantity to be their daily Allowance, so many Months as shall be necessary to reduce the Bulk of their Bodies to a moderate Size, in Proportion to their Stature.

§. 1376. While *fat* People are thus using Means to reduce their Bulk of Body, it appears to me very proper for them to abstain from those vegetable Aliments, which tend to *relax* the Vessels; to use no Summer-Fruits, except *Strawberries*, and *Currants*; no *Orange*, nor *Limon Juice*, nor *Vinegar*, but *Verjuice* instead of them, in their Sauces; and to drink *red Port Wine* moderately every Day, and to use more Exercise than usual to increase the contractile Force of the Vessels, and Membranes of the Body; the doing which will prevent any Inconveniences attending the gentle Method recommended, §. 1371, &c.

§. 1477. It may be of some Service, and encourage Persons that need it, to follow the Advice given, (§. 1371.) and therefore I shall here exemplify the Advantages, which Persons, who are *too fat*, may hope for by lessening

lessening the Quantity of their daily Aliments.

§. 1378. A GENTLEMAN of my Acquaintance, now upwards of forty Years old, by the Means of a sedentary Employment, and Disuse of Exercise, became exceeding *fat*, so as to weigh about nineteen Stone; that is about two hundred, and sixty-six Pounds: He could scarce walk two hundred Yards, but it put him much *out of Breath*, occasion'd profuse *Sweats*, and brought an *extreme Pain* into his *Back*, supposed to be occasion'd by the Weight of the Belly.

§. 1379. He was very much afflicted with *Pains* in his *Stomach*, growing daily, and *too great* a Propensity to sleep; but was sometimes awaked in the Night with a Sort of *knawing* Pains, and a Craving for *Food*.

§. 1380. He used several Medicines for removing these Disorders, (§. 1375, 1376.) but with little Success; the Consideration of which, with the Prospect of growing worse, made him resolve upon an ALTERATION of his *Diet*, both as to the *Quality* and *Quantity* of it.

§. 1381. He began this Alteration, (§. 1380) about *October* 30, 1735. He entirely left  
off



off *Wine*, and chose to eat only *white Meats*, or *Mutton* boil'd down with its *Brooth*, *Puddings* and *Fruit Pyes*; and at the *great MEAL*, limited himself, as near as possible, to Half of what he used to eat; which Reduction of his Aliment seem'd to him, as it really was, a very severe Discipline for six Weeks, or two Months; but afterwards became more tolerable.

§. 1382. In about a Fortnight he found it necessary to drink some *Wine*, and therefore return'd to moderate Use of it, allowing himself three, or four Glasses at his Dinners, and Suppers, which he has continued ever since.

§. 1383. Now the *Advantages* of this *low Diet* were very considerable: The Disorders of his Stomach were very soon, and very much abated; so that he could sleep the whole Night without Interruption, or Cravings for *Food*; and upon the Sinking of his Flesh, which was very fast, he recover'd an Ability to walk; so that in a Fortnight, or three Weeks, he was able to walk a Mile, or two without stopping, or leaning against any Thing, which he was utterly incapable of doing before; and within



within three Months begun a Practice of walking *four Miles*; (and often walks six, or eight;) which he has continued ever since, hardly intermitting a single Day.

§. 1381. He was weighed within nine Months after he enter'd on this new Way of Diet, and found he had lost near fifty Pounds of his former Weight. This he thought a sufficient Reduction of the Bulk of his Body, and therefore return'd to his usual Way of *eating Meat* at Dinner; only he generally avoided made-Dishes.

§. 1382. He has not return'd to the Use of *Meat* at Suppers; and only eats some light Thing.

§. 1383. In this Way of living, he has very little varied his Weight, not above six, or eight Pounds, the last three Years, which has been more frequently by Reduction, than Increase; he having been pretty often weighed, and observing the Difference.

§. 1384. The DISORDERS of his Stomach are not perfectly removed: He has some Returns of them at Times, but very supportable; and enjoys a much better State of Health, than he did for several Years before he changed his Way of Diet.

§. 1385. Now the Experience of this Gentleman shews, that Persons, who are *too fat*, may well expect considerable Advantages by exercising a little Self-Denial in lessening the Quantity of their daily Aliment. They will not only lessen the Burden they daily carry ; a Load, which to some is almost insupportable ; but also become more strong, and vigorous, more capable of any bodily Actions, and Labour ; and their Spirits more lively, and brisk : and they may, likewise, thereby recover from many Disorders, which render'd their Lives uncomfortable.

§. 1386. The mentioning these Things, (§. 1385.) I apprehend, will be sufficient to engage the wise and prudent, if *too fat*, to use such proper Means (§. 1371.) for promoting the Preservation of their Health, and the Prolongation of their Lives.

§. 1387. SUPPERS come next into our Consideration ; and here I shall give an Account of Things proper for them, and then Rules fit to be observed in the Use of the Particulars.

§. 1388. The following Things will make suitable Suppers for Persons afflicted with the *Stone*, or *Gout*, viz.

I. MILK,



1. MILK, not boiled, but made only *Blood-warm*, and *Bread*.

2. PYES, or TARTS made with *Codlins*, or other *Apples*.

3. BREAD with *Strawberries*, mixed with *red Port Wine*, and sweetned with *Sugar* to the Palate.

4. CUCUMBERS with *Vinegar*, and a little *Salt*, and eaten with *Bread*.

5. APPLES boiled, and sweetned with *Sugar*, (as when used for Sauce to a *Goose*) and spread on a Slice of *Bread*.

6. APPLES, or PEARS, stewed or baked, to be eaten with *Bread*.

7. APPLES roasted, and the Pulp of them put into *Milk*, and sweetned.

8. ASPARAGUS boiled, with *Butter*, and *Bread*.

9. BREAD, and *Butter*, with or without a Sallet of *Goss Lettice*, *Vinegar*, *Mustard*, and *Salt*.

10. BISKET, or *dry Bread*, and so much of one or other of the *small Liquors* directed for Dinner, as is requisite to quench the Person's Thirst; and two, three, or four Glasses of *Wine*, or *Cyder*.

11. BREAD GRUEL, (made with *Onion*,



or *Leek Water*, with a little *Salt*, and *Butter*, and *Bread* broke into it.

12. OATMEAL GRUEL made, in the same Manner, with *Onion*, or *Leek Water*, &c.

13. CURRANT GRUEL, sweetned with *Sugar* to the Palate, and *Bread* broke into it.

14. A MESS of *Côco*, sweetned with *Sugar*, and a Slicc of toasted *Bread* broke into it.

15. A PIECE of *Bread* toasted, and spread with *Honey*, eaten as solid *Food*, and warm *Milk* drank with it, as common Drink, will make a suitable Supper; and it is not only a nourishing, but in many Diseases, a medicinal, and healing Diet.

§. 1389. Any of the *small Liquors* mention'd §. 1347, which best suit the State and Symptoms Persons are under, may be used at Supper, as well as Dinner.

§. 1390. SUPPERS made of any of the Things recommended, §. 1388, will have a Quality *dissolvent* of the *Stone*, and *alterative* of the Nature of the *gouty Humour*; but yet the Quantity of them should be moderate.

§. 1392. And the following RULES may serve

serve to direct Persons, what to chuse for their Supper, *viz.*

*Rule 1.* Persons in the SUMMER, when the Weather is *hot*, and the Temperature of the Air *too dry*, may fitly chuse one or other of the Things mention'd, §. 1388, N<sup>o</sup> 1, 2, 3, 4, 5, 6, 7, 8, 9.

§. 1392. *Rule 2.* In the WINTER, and when the Weather is *cold*, and the Air *moist*, one or other of the Things recommended, §. 1388, N<sup>o</sup> 10, 11, 12, 13, 14, 15, will be more suitable.

§. 1393. *Rule 3.* Persons that are of *sanguine*, or *choleric* Constitutions, should prefer for their Suppers *Codlin*, or other *Apple Tarts*, or *Pyes*, or *Pear Pyes*; or boiled, or stewed, or baked *Apples*, or *Pears*; or *Bread and Butter*, with *Cucumbers*, or a Sallet of *Goss Lettice*, *Vinegar*, and *Salt*; and drink either *Limonade*, or *Orange Water*, or *Codlin*, or *Pippin Water*, or *Honey Water*, for their small Drink, and a soft *Cyder* chiefly for their strong, when they have Occasion for a spirituous Liquor.

§. 1394. *Rule 4.* People, who are of a *cold* Constitution, and have a soft *flabby* Flesh, and a *chilly* Habit of Body, may fitly



choofe *Bisket*, or *Seed-cake*, with *Strawberries* mixed with *red Port Wine*, and sweetned with *Loaf Sugar* to their *Palate*, in the *SUMMER*, and drink two, or three *Glasses* of *Wine*: Or *Bread*, and *Butter*, and three, or four *Glasses* of *Wine*, either *red*, or *Madera*, or of the rough strong bodied *Cyders*; and in the *WINTER* take a *Mefs* either of *Onion*, or *Leek-Gruel*, or of *Coco*, with a *Toast* and *Milk*, for their *Supper*.

§. 1395. *Rule 5.* Persons that are *too lean* may prudently choofe a *Mefs* of *Milk*, and *Bread*, or any of the *Pyes*, or *Tarts*, (§. 1388, N° 2.) with *Bread*, and *Butter* after them; or *Bread*, and *Butter*, with a *Glass* or two of good old *Brunswick Mum*.

§. 1396. *Rule 6.* Persons that are *too fat* should make but small *Suppers*; and the most proper Things for them are the following, viz. *Seed-cake*, or *Bisket*, or *Bread*, without *Butter*, with *Wine*, and *Water*, or *Cyder*, and *Water*, sweetned; or *Limonade*, or *Orange Water*, in *Summer*; and *Onion*, or *Leek*, or *Currant Gruel*; or *Coco*, and toasted *Bread*; or *Seed-cake*, *Bisket*, or  
dry



*dry Bread*, with three, or four Glasses of *Wine* for their Supper in the Winter.

§. 1397. Persons, that lead *sedentary* Lives, and have been accustom'd to drink a Bottle or two of *Wine* daily; and they, who totally abstain from *animal Food*, may in an Evening drink more *Wine*, than others: But it appears to me very adviseable for the greatest Drinkers of *Wine*, and other spirituous Liquors, gradually to lessen the Quantity of them, till they find that less than a Pint will be sufficient to serve the real Occasions of their Bodies.

§. 1398. This is a Point very attainable; and they who gain it, will have *cooler* Heads, more temperate Bodies, and more chearful Minds; and those Reasons, which shew the Usefulness of *Wine*, do also plainly prove it to be hurtful when taken daily in *too great* Quantities.

§. 1399. The BENEFIT, in many Cases, of drinking *Wine*, may justly be concluded from its *attenuating, detergent*, and moderately *stimulating* Qualities, (§. 734.) known by the experienced Effects of it. If *Wine* is mixed with *Water*, and used as a *Gargarism*, by a Person, whose Mouth is foul with a

*viscid Phlegm*, he finds that it incides, attenuates, and cleanses his Mouth from the viscid Humours, and somewhat constricts the Membranes of it. The like Effects it produces in the Stomach, and Intestines, if it be swallowed ; and we may well conclude, that it produces the like Effects in all the Arteries, and Veins, and other Vessels of the Body, and on all the Membranes of them, when it is brought into the Blood, and mixed with it, and passes from it mixed (in Proportion to the Quantity of it taken) with all the Humours secreted, and excreted.

§. 1400. These natural Effects, (§. 1399.) of drinking *Wine*, teach us, in what Cases the Use of it may be serviceable ; and they evidently prove, that the continued Use of it in *too great* Quantities, will wear out the Solids, destroy the Elasticity of the animal Fibres, and hasten on that State, and those Symptoms, which are the natural Consequences of living to a great old Age. I have seen a Man, not much above forty, with *shaking Hands, feeble Limbs, Head declining, Shoulders round*, and his *Appetite in a Manner lost* ; and who had brought himself



himself into this melancholy Condition by a Course of hard Drinking.

§. 1401. WINE is one of the most beneficial Aliments moderately drank ; but one of the most pernicious when excessively used. The Poet was in the same Sentiments, when he said,

Ὅν μὲν θνητοῖσι θεῶν πάρα δῶρον ἄριστον,  
Πινόμην· ὁ κατὰ μέτρον ὑπὲρ μέτρον ὃ χειριον.

*E Suida de Panyaside.*

§. 1402. As for Persons much afflicted with the STONE, besides the Observance of the foregoing RULES, I would advise them twice a Day to drink for a Draught, four, or six Ounces of some of the *dissolvent* Liquors ; and recommend for this Purpose one or other of the following, *viz.* *Onion Water, Leek Water, Limonade, Orange Water*, or any other of the first Class of Dissolvents, that may better suit the Season of the Year, the Temperature of the Air, and their Constitutions. This supernumerary Draught may be called the *co-adjutant* Liquor.

§. 1403. As for Persons much troubled with the GOUT, they should be very careful to avoid whatever may check, or diminish  
the



the Discharge by insensible Perspiration; because the Impediments of this Evacuation may occasion a Retention of the Particles of the *gouty* Humour in the Body, and a Fit of the Gout in Consequence of it. I never had, indeed, any Thing of the *Gout*, or *Rheumatism*, but by sitting at Study, till I have been *very cold*, I have often brought on myself a *Catarrh*, and *Cough*, which have been troublesome several Days, till the Discharge by *insensible Perspiration*, diminished by the Cold, was increased again to its usual Quantity.

§. 1404. I have now shew'd what Sorts of Aliment have a Quality conducive to the CURE of the *Stone*, and *Gout*, and given Directions for a proper Use of them. There are two SYMPTOMS however, which some Bodies may fall under by Means of them, *viz. Loosenesses*, and *Flatulencies*; and therefore, it is requisite to direct Persons what to do, when they happen.

§. 1405. I. As to LOOSENESSES. When these occur, People should omit the Use of *Fruits*, and of all the *acid*, unfermented, vegetable Aliments, till they become free from them; and use other DISSOLVENTS, such

such as *Turnips*, *Potatoes*, *Onions*, and *Leeks*; and drink *red Port Wine*, cold, or mull'd with *Cloves*, or *Cinnamon*; and eat a little old *Cheshire Cheese* after their Dinners; *Panada* (made with *Bisket*, or Bread) or *Rice Gruel* may be for their Suppers.

§. 1406. 2. FLATULENCIES require the Difuse, for a While, of the Summer-Fruits; and the drinking two, or three, or four Glasses of some well bodied *Wine*; and the eating a little old Cheese at Dinner, by those who can bear it: A Draught of hot *Water* may often relieve; and when this proves ineffectual by itself, half a Spoonful of *Brandy* added to a Quarter of a Pint of hot *Water* may happily allay the Ferment in the Stomach, or Bowels, absorb the elastick Air, and make the Person easy.

§. 1407. NEPHRITICK, and *Arthritick Pains*, or FITS of the *Stone*, and *Gout*, I have consider'd distinctly in my *Treatise of Painful Distempers*, lately published; and therefore I shall say nothing of them here.

§. 1408. I hope the PROBABILITY of curing both the *Stone*, and *Gout*, by suitable Aliment, has been made sufficiently evident; and that the RULES of DIET, recommended, appear



appear proper for obtaining a Recovery from these painful Distempers. As for the Time necessary for accomplishing a *Cure*, this will be longer, or shorter, according to the State of every Patient's Case. The Cure of the *Gout*, I think, may be attained in less Time, than the Dissolution of a large Stone: When the *Calculi* are small, and of the softest Kind, they may be dissolved much sooner than those that are larger, and of the hardest Sort. But supposing a Stone in the Bladder to be of the largest Size, and of the most compact Texture; and that the total Dissolution of it will require the Observance of the Rules of Diet for two Years, or longer, yet surely it will be a very happy Alteration made thereby in the Case of such a Person, *viz.* to have, not only a Stop immediately put to the Increase of it, but to have it brought into a wasting Way, growing daily less, and less; which in Time must end in its total Dissolution.

§. 1409. THAT I may render this TREATISE more extensively useful, I shall consider what other *Distempers* may be abated, if not cured, by those Aliments, that have discover'd



a Quality *dissolvent* of the *Stone*, and endeavour to give such DIRECTIONS about the Use of those Aliments, as may promote the Recovery of Persons from them.

§. 1410. The DISTEMPERS I propose to take Notice of, are the following, *viz.* *Colds, Fevers, Quinsseys, Coughs, Asthma's, Cholicks, and Pains of the Stomach, Costiveness, Nervous Diseases, Cachexies, or Green Sicknels, Dropsies, Tumours, and Scurveys.* These Particulars I shall consider in the Order they are mentioned.

§. 1411. I. COLDS, by which I mean the first sensible Effects of an obstructed *Perspiration*, or that morbid State of the Body, which makes Persons to say they have *taken Cold*: When this is the Case, I would advise Persons to drink all their Liquors warm, and for two or three Nights successively, (or longer if there shall be Occasion) to make their Suppers on a Mefs of *Onion*, or *Leek Gruel*, with a little *Butter, Salt, and Bread*; or on *Bread*, and boiled, or baked *Apples, or Pears* warm; and to drink *Fig Water, or Raisin Water, or Honey-water* with it; and going into Bed to drink hot a Pint, if they can, of *Cyder Whey*

*Whey*, or *Mountain Whey* ; or *Whey* made with *white Port Wine* ; or a Pint of *Water* (in which a roasted *Apple* has been mash'd) sweetned to their Palate: And in the Mornings to make their Breakfast on a *Toast* spread with *Honey*, and drinking warm *Milk* after it ; or on *Bread* and *Butter*, with *Tea* acidulated with the Juice of *Seville Oranges*.

§. 1412. II. When Persons are taken ill with *burning*, or *inflammatory* FEVERS, I would advise them to make *Oatmeal Gruel*, or *Panada* their Food ; and to drink abundantly of *Cyder*, or *Vinegar Whey*, sweetned to the Palate with *Sugar* ; or a Mixture of *Vinegar*, and *Water*, (by itself, or sweetned with *Honey*, or *Sugar* ; and the Proportions I would advise, are two, three, or four Ounces of *Vinegar* to a Quart of *Water* ;) or of *Limonade*, or *Orange Water*, §. 1347, N<sup>o</sup> 1, 2. Mr. Ray takes particular Notice of the Virtue and Efficacy of LIMONS to *quench Thirst*, *abate febrile Heat*, *dissolve the Stone*, *cleanse the Vessels*, *remove Obstructions* of the *Kidneys* ; to *strengthen the Stomach*, and *Heart* ; *attemperate the Bile* ; and therefore to remove those *Weaknesses*,



nesses, *Faintings*, *Vomitings*, and *Hiccups*, which often attend burning Fevers (a). He likewise speaks of the *Juice* of ORANGES as very useful in *Fevers*; and that he had often found great Relief from it against febrile Heat (b). I may add, that WINE and *Water* mixed to the Strength of small Beer, makes another Sort of suitable *Drink* for People in *Fevers*; and less diluted with *Water*, makes a proper, and a pleasant *Cordial*. The Usefulness of Wine in Fevers, and other Diseases, I can testify from my own Experience, §. 735. It contributes not

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(a) *Limonia* — *sitim potenter restinguunt, & febrilem ardorem compescunt: succi Limonum admodum efficaces in dissolvendis calculis & detergendis partibus.* Her. Grabe de Limon. p. 10. — *Syrupus de succo Limonum magni fit ad calculum, & obstructionem renum; item ad sitim, & aestum in febribus ardentibus: cordi, & ventriculo robur addit, & bilis effervescentiam compescit: ideoque haud infeliciter imbecillitates, lipothymias, fluctuationes, vomitus, & singultus febribus ardentibus supervenire solitos curat.* Vid. Raii Hist. Plant. p. 1657.

(b) *Succus mitior est minusque acidus quam Limonium succus, frigidus tamen, & gustui gratus, & ad appetitum excitandum utilis, ut ad sitim extinguendam in febribus. Nos certe in febrili ardore magnum inde solatium multoties sensimus.* Vid. Raii Hist. Plant. p. 1659.

only



only to preserve, but to increase the Strength of the Solids, and to promote the Attenuation of the animal Fluids, (§. 734, 1399.) Dr. *Boerhaave* seems to have the same Sentiments concerning the Use of WINE in Fevers: He thought the *rough* WINES have something very friendly, and salutary to human Bodies, because of their gently adstringent Quality (*a*); and that the *French red Wine* by its Roughness strengthen'd the Vessels; and on this Account Wine might be given in most Diseases, but with Prudence, and dilated with a great deal of Water (*b*): And as to his own Practice, he said, “ *I myself in burning Fevers, give*  
 “ *Rhenish Wine diluted with Water; and*  
 “ *this Water cools more, than if it had no*  
 “ *Wine.*” For which Reason, he appre-

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(a) *Hæc vina aliquid habent, quod humano corpori salubre, & amicum est; vina autem hic conveniunt, quæ leniter adstringunt. Vid. Boerhaav. Prax. Med. Par. I. P. 45.*

(b) *Vinum Gallicum rubrum — suâ austeritate vasa roborat, habetque vim uniendi ad se mutuo, & robur consistit in optima fibrarum unione; hinc fere in omnibus morbis dari potest: verum cum prudentia, & cum multa aqua dilutum. Vid. ibid.*

hended, that if it was more given in Distempers, it might be to the Advantage of the Sick (a). Dr. BOERHAAVE also recommends *Vinegar* against *Fevers* that arise from a *too acrid Bile*, *alkalescent Salt*, or a *putrid Quality*, and *venemous Bites* (b). In his own Experience he found it so effectual against the Putrefaction of the Humours, and Mortification, that he thought nothing equal to it (c). He observed, that it preserved animal Substances, *Flesh*, and *Blood* from corrupting; and yet that it has an attenuating Quality; so that, if warm *Vinegar* be mixed with Blood, or its *Serum*, it will *thin* them, but not inspissate them; and it is so far from producing *polypose* Concretions, that it will dissolve Co-

(a) *Sic ego ipse in ipsa febre ardente do vinum Rhenum aqua dilutum, & sic hæc aqua plus refrigerat quam sine vino; ideo si plus adhiberetur in morbis ægro solatio esset. Vid. ibid. p. 45, 46.*

(b) *Refrigerandi vim habet eximiam, quoties Febris oritur stimulo acrioris bilis, alkalæscantis salis, aut putridi nati in corpore humano, & morsu venenato ferarum — Vid. Boerhaav. Element. Chæmiæ, Vol. 2. p. 185.*

(c) *Ad putredinem veram humorum, corruptionem mortiferam, gangrænosos reptatus, adeo prodest, ut nihil habet simile; quod expertus palam eloquor. Vid. ibid.*



*agulations*; and that therefore in acute Fevers, in the *Plague*, *Small pox*, *Measles*, and such-like Distempers, *Vinegar* is a most excellent Remedy(a). It must be likewise observed, that altho' the *dissolvent* Aliments, recommended in Fevers, are exceeding proper in *burning*, and all *inflammatory* Fevers, as *Pleurisies*, most Sorts of the *Small-pox*, and indeed in all FEVERS produced by *inspissating Causes*, which render the Blood, and Lymph *too thick*, yet they are not suitable in *Fevers*, which are brought on by *dissolvent Causes*, and are attended with colliquative Evacuations, as *Loosenesses*, or profuse, debilitating *Sweats*, profuse and wasting Evacuation by Urine; and in which the Blood is *too thin*, and the Heat of the Body rather less than in Time of Health: In Fevers of this last

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(a) — *Caro, cruorve, copioso perfusa Aceto sincera servantur? sed & attenuandi virtutem quoque, pace aliter sentientium, Aceti virtutibus accenseo; si enim tepesfactum cruori immiscetur, ejusdemve sero, diluit illa, non cogit, nec generat hac admistione polypos, sed suaviter resolvit coagulata. In acutis ideo febribus, in ardentium Februm immanitate, in Peste, Variolis, Morbills, similibusque malis, ubi fida Anatome coagulata reperit, Acetum remedium summum. Vid. Boerhaav. Element. Chemiæ, Vol. 2. p. 185.*



Kind, *Verjuice*, instead of *Vinegar*, mixed with *Water*, or *red Port* ; or *Rhenish Wine* mixed with *Water* to the Strength of small Beer, will make suitable *Drinks*, which should always, in such Fevers, be taken pretty warm.

§. 1413. III. As to the QUINSEY. When Persons first perceive any Uneasiness, and Pain in their Throat, with a Difficulty of *Swallowing* coming on; they should drink plentifully of some or other of the Liquors recommended, (§. 1412.) and almost perpetually gargle their Mouths, and Throats with a MIXTURE of equal Parts of *Vinegar*, and *Water*, and a fourth Part of *Honey*, or of the *Syrup* of *Elderberries*, or *Syrup* of *Mulberries*, made warm ; and outwardly have their Throats fomented with a *Decoc-tion* of ONIONS, after an equal Part of *Vinegar* has been added to it, and made very warm ; or only with *Vinegar*, and *Water* mixed.

§. 1414. This Method used in the Beginning of the Distemper, (§. 1413.) may happily prevent its Increase, and soon recover the *Blood* to its natural *Thinness*, and *Coolness* : But if the Disease continues,

tho' other Remedies will be wanted, when the Parts tumified, or fwelled, are in a State of Suppuration, yet the Liquors propofed will be proper for removing the *viscid* Quality of the *Blood*, and promoting the natural Excretions, and a copious Difcharge from the falival Glands, and may contribute much to haften the Recovery of the Perfon.

§. 1415. When the Pains in the Throat continue, and increafe, and the Parts affected, are in a State of *Suppuration*, it will be proper to gargle the Mouth and Throat often with fuch a Liquor as the following.

TAKE *Onions*, and the Leaves of the common *Mallows*, or of *Mafh Mallows*, of each two Ounces; boil them in a Pint and half of Water till it comes to a Pint; then to the ftrained Liquor add of *Honey* two Ounces; thus make a GARGARISM to be ufed warm. Or the *Onions* may be omitted, if they are offensive.

§. 1416. IV. COUGHS come next into Confideration; and here I may obferve, that feveral Things in Ufe, as Aliments, will contribute much to their Cure. Perfons afflicted with them muft abftain from all  
*malt*

*malt Liquors* ; and for *Suppers*, and common Drink, observe the Directions given, (§. 1411.) and take half a Thimble full of the *Flower of Brimstone* in a Tea Cup of warm Milk for a Draught, every Morning ; and eat boil'd *Onions*, or *Turnips* with their *animal Food*.

§. 1417. V. *ASTHMA's*, or *Shortnesses of Breath* may be relieved by using the Things recommended, §. 1411, 1416, by eating plentifully of *Apples* every Day ; and by making their Breakfasts on a Mess of warm *Milk*, into which two, or three, or four Ounces of a strong Decoction of *Garlick*, and one Ounce of *Honey* have been put, and eating *Onion Gruel* for their Suppers.

§. 1418. VI. *CHOLICKS*, and *Pains*, with or without Sickness, in the *Stomach*, may be abated, and sometimes removed by drinking a Draught, or two of very warm *Water* by itself, or sweetned with *Sugar* ; and if this Remedy avails nothing, I would advise the adding two, or three Tea Spoonfuls of *Brandy* to a Quarter of a Pint of *Water*, which may render it more effectual ; especially if any Ferment, or *Flatus's* in the



Contents of the Stomach, or Bowels, be a Cause of the Pains.

§. 1418. If an *acid* Acrimony in the Contents of the Stomach, known by *sower Belchings*, occasion'd the Pains, the mixing a Thimbleful of finely powder'd *Chalk* with the *Water* and *Brandy*, will make it a more suitable, and efficacious Remedy.

§. 1419. VII. COSTIVENESS, or going to Stool *too seldom*, may be removed by eating plentifully of the Summer-Fruits in their Season; and of Sallets of *Goss Lettice* with Vinegar, and *Salt*, without Mustard; or of baked *Apples*, and *Pears*, sweetned with Sugar; but which will be more *loosening*, if sweeten'd with *Honey*; drinking freely of the small acid Liquors mention'd, §. 1347, or of *Oatmeal Gruel* made with a mucilaginous *Decoction* of *Mallows*.

§. 1420. VIII. NERVOUS DISEASES, *Lowness* of the *Spirits*, and other *hysterick*, and *hypochondriack* Symptoms, I apprehend, will gradually abate, and may in Time be perfectly removed, by living strictly according to the Rules of Diet recommended to the Observance of Persons afflicted with the *Stone*, and *Gout*; only I would here remind

remind my Reader, that *Apples*, in my Opinion, above all other Vegetables, are like to be most serviceable to People under Complaints of this Kind; and that of fermented, spirituous Liquors, *CYDER*, by itself, or diluted with *Water*, should be prefer'd. *HIPPOCRATES* thought the drinking *Wine*, with an equal Quantity of *Water*, a good Remedy against Lowness of Spirits, or *Anxiety*, *Yawnings*, and *Shiverings* (a); and I am in the same Sentiments, tho' I think *Cyder* to be a better Liquor against the Disorders under Consideration. *Dr. BOERHAAVE*, (b) I think, very deservedly commends the Use of *Vinegar* in Diseases of this Class. He acquaints us, that with great Success he advised it for Persons troubled with *Faintings*, *lethargick* Symptoms, *Vomitings*, and such-

(a) Αλύκη, χάσμη, φρίκη, δινος ἴσος ἴσω πινόμεναι, αὖτε πλὴν νῆσον. Hip. Sect. 7. Aph. 56.

(b) *Debilibus, languentibus, lethargicis, soporosis, syncopticis, vomituriensibus, incassum sæpe succurrere conatus per artificiosissima Chemiæ producta, summum tandem ab Aceto naribus orique adhibito, vel in ventriculum ingesto, auxilium impetravi. Quin etiam, quod soli credent experti, Convulsis, Hypochondriacis, Hystericis, prodesse sæpius memini. Vid. Boerhaav. Element. Chemiæ, Vol. 2. p. 185.*



like Disorders, after he had in vain tried very elaborate chymical Preparations; and further observes, what he apprehended few will believe, but those who know it by Experience, that is, the *Efficacy* of it in *Convulsions*, in *hypochondriack*, and *hysterick* Diseases, which he had often observed. He advised the outward Application of it to the *Nostrils* and *Mouth*; and to be taken inwardly. I can testify from my own Experience the Efficacy of this Sort of Aliment, in several of the Diseases mention'd by him. I was once extremely Stomach-sick, or *surfeited*, as some express it, with eating *pickled Salmon*: I tried various Remedies to no Manner of Advantage: My Stomach seem'd vastly loaded, but I could not vomit; at last I thought of *Vinegar*, and desired some: My Friend, at whose House I was, happen'd then to have some *white Wine Vinegar* exceeding good, I drank about a Wine Glass of it, and in less than a Quarter of an Hour my Stomach became exceeding easy; and I had no further Inconvenience from that Surfeit. One, or two, or three Spoonfuls of *Vinegar* mixed with an equal, or a doubly Quantity of *Water*, will make a  
suitable



suitable Draught for some Persons against *Vomitings, hysteric Fits, and hypochondriacal Disorders*; which may be repeated, as there shall be Occasion.

§. 1421. IV. CACHEXIES, the *Green-Sickness*, and such *morbid Habits* of Body, may be very much alter'd, and amended, by suitable Aliments. *Boys* are liable to fall into this State of Body, and I have seen several with the *cachectick* Countenance, and that were *short-breath'd*, and had depraved Appetites: But they are *GIRLS* that most commonly fall into this sickly State; and one Reason of it I take to be this, that the *Boys* are more in the Air, in Action, and Exercise; but the *Girls* more confined within Doors, and restrained from the Activity, which their Time of Life would prompt them to.

§. 1422. As to these young *female* Patients, I would advise their being encouraged to frequent Exercise of Body, but never persuaded to that *Sort, or Measure* of it, which fatigues them, or puts them much out of Breath: And as they recover out of their weakly, dispirited Condition, they will become more inclined to exercise, and

at

at Length as lively, and active as may be wished. In the mean Time, let their Bodies and Limbs be well rub'd with a *coarse Towel* every Morning and Evening, till they become able sufficiently to use bodily Exercise with Pleasure.

§. 1423. In such Bodies, (§. 1422.) the Blood is commonly *poor, watery, and viscid*, the Vessels *too lax*, the Fibres *weak*, and the vital Heat *deficient*; on which Accounts I would recommend the following Rules to be observed in the Management of their Diet, *viz.*

Rule 1. *To diminish the Quantity of the liquid Part of their Aliment.*

Rule 2. *To give them of those Aliments daily, which are proper to alter the viscid Quality of their Blood, and Increase by Urine and insensible Perspiration, the Evacuation of the redundant Quantity of the watery Humours, and which may remove the Laxity of the Vessels.*

§. 1424. For these Purposes, (§. 1423, Rule 2.) I recommend COFFEE, with or without Milk, pretty well sweetned; or a Mess of Coco, with toasted Bread, for their Breakfasts; boiled Onions frequently, and plentifully



tifully with the *animal Food*, they eat ; *Water* with so much *WINE*, either *Rhenish*, or *white* or *red Port*, as will bring it to the Strength of small Beer ; or *Cyder*, and *Water* mixed in like Manner, for their common Drink at their *DINNERS* ; and *Onion Gruel*, or *Coco* with *Milk* and *Sugar*, and *Bread*, for their *SUPPERS*.

§. 1425. Mr. *Ray* speaks of (a) *ONIONS* as suitable to the Intentions, which are to be pursued. He reckons them good to *remove Obstructions*, to *procure the Menses*, and the Discharge by *Urine*, and to promote the *insensible Perspiration* : And as for the Liquor we call *COFFEE* (b), he relates from

(a) *Cepæ — obstruções expediunt, menses, & urinas cient, transpirationem insensilem promovent. Vid. Raii Hist. Plant. p. 1116.*

(b) *Utuntur autem hoc decocto, (scil. Coffee) Alpino autore, qd roborandum ventriculum frigidiorum, adjuvandamque concoctionem, & non minus ad auferendas à visceribus obstruções, inque tumoribus hepatis & lienis frigidis, & antiquis obstruções. Uterum etiam excalfacit, & ab obstrução liberat ; unde in familiari usu est apud omnes Ægyptias, Arabasque mulieres, ut semper dum fluant Menses, ipsorum vacationem, hujus decocti ferventis multum paulatim sorbillantes adjuvent : ad promovendos etiam in quibus suppressi sunt usus hujus decocti, purgato corpore, multis diebus utilis est. Vid. Raii Hist. Plant. p. 1691.*

*Alpinus,*



*Alpinus*, that it was used to strengthen cold Stomachs, help the Digestion, and to remove Obstructions from the *Viscera*; and in cold *Tumours* of the *Liver*, and *Spleen*, and in old Obstructions: That it likewise warms the *Uterus*, and frees it from Obstructions; and that on this Account, it was a common Practice among the *Egyptian*, and *Arabian* Women, when they had their *Menses*, to assist Nature, by sipping of this Liquor very hot; and observed, that the continued Use of it is beneficial to those, that have a Suppression of them, after their Bodies have been purged.

§. 1426. X. DROPSIES also may be relieved by a proper Regulation of Diet. I shall therefore briefly give some Directions, which may contribute much to the Cure of these Distempers, if they are not arrived to that State, which renders them incurable; and they are these, *viz.*

Rule 1. *Let. hydropical Persons reduce the liquid Part of their Aliment to one Pint a Day.*

§. 1427. PEOPLE are generally very *thirsty*, when this Distemper has been any considerable

siderable Time upon them ; and therefore often drink more than they used to do in the Time of Health ; the doing which makes the Disease increase apace ; because they generally perspire less, and make less Urine than in Time of Health : And indeed there is very little Ground to hope for their Recovery, who have not Resolution enough to lessen the Quantity they used to drink. But a strict Observance of the Rule given, (§. 1426.) may conduce very much to their Cure. While I lived in the *Country*, I was sent for to a GENTLEWOMAN near sixty Years of Age ; who was extremely swelled not only in her *Body, Thighs, Legs, Feet, and Toes*, but her *Face, Arms, Hands, and Fingers*, were swelled to a surprizing Degree. I represented to her the Necessity, and Importance of drinking very little ; she readily consented to follow my Directions : I gave her Leave, as I remember, to eat any Thing her Stomach could take with Pleasure, and easily digest ; and prescribed an *Electuary*, and a *Liquor*, to be made by the Apothecary, (proper to alter the morbid Quality of her Blood, to increase the Quantity of her Urine, and strengthen the Vessels ;)

fels;) and enjoined, that she should take *four* Ounces of it *Morning, Noon, and Night*; (that is, three Quarters of a Pint every twenty-four Hours) and drink nothing else. She strictly observed the Directions; God blessed the Method, and she recover'd. She afterwards removed into another Country, and I never heard that her Body swelled again; but have been inform'd, that at last she died of a Fever. This Instance shews, that People may live with less Liquid, than some, it may be, imagine; and should encourage Persons in *Dropsies* to consent to a proper Diminution of the Quantity they used to drink. As for their *Thirst*, it may be abated by holding in their Mouths some *Vinegar*, and *Water* mixed, or gargling with some other *acid* Liquor; or by chewing and spitting out Slices of peeled *Lemons*, or *Oranges* dipt in powder'd Sugar; or any acid Fruits raw, or preserved; or the Jellies of them, held a while in the Mouth, and then spit out, may be useful to this Intention.

§. 1428. Rule 2. *To make the liquid Part of the Aliment for hydropical Persons of such Ingredients as will contribute most to abate*



*abate Thirst, increase Urine, and insensible Perspiration; and the Cohesion of the component Parts of the Solids; that is, to abate their Laxity, and strengthen their Vibration.*

§. 1429. These Intentions (§. 1428.) may very much be promoted by the following DRINKS; one or other of which, as the Patient likes best, or all of them alternately, may be used as their common, and their only Drink, *viz.*

§. 1430. I. DRINK against the *Dropsy*.  
TAKE of the *Juice of Limons, Leek-water*, of each four Ounces; *Rhenish Wine* half a Pint, *Sugar* enough to make them pleasant: Mix them for a DRINK to serve one Day; and to be divided into three Parts, one for *Breakfast*, another for *Dinner*, and the third for *Supper*.

#### II. DRINK.

TAKE *Juice of Limons, Onion-water*, of each four Ounces, *white Port Wine* half a Pint, *Sugar* enough to make them pleasant: Mix them for a DRINK to be used as the former.

#### III. DRINK.

TAKE *Juice of Limons* four Ounces, *Leek-water*

*water* ten Ounces, *Brandy* two Ounces ; mix them together, and add so much *Loaf Sugar* as will bring them to an agreeable Taste for another Sort of DRINK in *Dropsies* ; to be divided, and taken as the first.

#### IV. DRINK.

TAKE *Juice* of *Seville Oranges*, *Onion-water*, of each four Ounces, *red Port Wine* half a Pint, *Sugar* a sufficient Quantity to make them pleasant : Mix them for another Sort of DRINK.

#### V. DRINK.

TAKE *Decoction* of *Parsley Roots*, (or *Onion*, or *Leek-water*) and *Rhenish*, (or *white Port*, or *Mountain*) *Wine*, of each half a Pint, with or without *Loaf Sugar* : Mix them for another Sort of DRINK.

§. 1431. These DRINKS (§. 1430.) may be varied in the Proportions of the Ingredients as may best suit all the Symptoms, and the Palate of the Patients ; and as shall best agree with them.

§. 1432. Rule 3. *Let hydropical Persons feed as much as possible on the driest Sorts of Aliment ; on Puddings without Suet ; Bisket, Seed Cake, Bread, with Leeks, or Onions*

*Onions* boiled, as for Sauce to *Rabbits*, with a little *Pepper*, are proper Sorts of Food for them; But *animal Food* is not the most suitable.

§. 1433. I would advise Persons in a *Dropſy*, to be weighed every Week, and to keep an exact Account of their Weight every Time; by which Method they will know, when they gain Ground, and when they looſe it; and what Advantage they obtain by leſſening the Quantity of the *Liquor* they uſed to drink. It will likewiſe be of great Uſe, if the *Urine* they make be ſaved together, and exactly meaſured once every twenty-four Hours; its Quantity ſet down in Writing, with the Day of the Month; and with an Account, in another Column, of what was the *Liquor* they drank that Day: By this Means they will learn what *Liquor* is moſt beneficial to them, and ſhould be chiefly uſed: Beſides, if they find the Quantity of *Urine* they make in a Day equal to the Quantity they drank, they may be ſure the Quantity of *Water* within them is leſſening, becauſe there is daily a Diſcharge from the Body by inſenſible Perſpiration, and other Ways of Excretion, as



well as by Urine; and if the Quantity of their Urine exceeds the Quantity they drink, so much more may they hope for a Recovery.

§. 1434. XI. TUMOURS from *internal Causes*, I apprehend, may, many of them, be kept within Bounds, if not gradually diminished, and cured by Means of suitable Aliment. One Instance of such a Cure has been related, §. 1086.

§. 1435. It may here be observed, as to *scrophulous* Swellings, (called the KINGS-EVIL) *schirrous* Tumours, and *Cancers*; and every other Kind of Tumour from internal Causes, (§. 1434.) must be derived either from the *Blood*, or from the *Chyle* mixed with the Blood, before it is transmuted into the Nature of the animal Fluids.

§. 1436. For every Thing secreted, or excreted, in the animal OEconomy, except Part of the *Fæces alvinæ*, was (antecedent to its Secretion, or Excretion) in the sanguine Arteries, and circulating with the common Mass of Blood; so that the first minute Beginnings of every such Tumour, (§. 1434.) and every Addition to it, comes from the Blood flowing thro' its Arteries; and according to the Nature of the Matter,  
thus

thus derived from the *Blood*, or from the *Chyle* circulating with it, such is the Nature of every Tumour ; and a distinguishing Name is given to each Sort of them.

§. 1437. It seems to me, that *scrophulous* and *schirrous* Swellings are occasion'd by an insufficiently digested *Chyle*, or a Chyle not sufficiently transmuted into the Nature of the Blood.

§. 1438. SWELLINGS called *Steatoma's*, from their Matter resembling *Suet* ; *Sarcoma's*, whose component Matter is like Flesh, and *Cancers*, I think, arise from the *Blood*. But whether the *Chyle* (§. 1437.) or the *Blood* be the Source of the Tumour, any Person complains of ; yet suitable Aliment may contribute largely to the Cure ; and to this End I recommend the following Directions.

§. 1439. 1. As to the KINGS EVIL, and any Swelling near akin to it, deriving from the *Chyle*, (§. 1437.) Persons afflicted with them, should be managed as in the Case of *Cachexies*, and according to the Rules given, §. 1421, &c. The Observance of which, as it may strengthen the Solids of the Body, promote the Transmutation of the



Chyle into good Blood, and all the natural Evacuations from the Body, so it may not only prevent the Increase of *scrophulous* and such-like *Tumours*, but bring on a gradual Abatement of them, and in Time, with the Assistance of proper Medicines, a perfect Cure.

§. 1440. 2. As for TUMOURS arising, and increasing by Particles of an animal Nature secreted from the *Blood*, (§. 1438.) it appears to me requisite, that the Persons, who have them, should gradually lessen the Quantity of their *animal Food*, till they come to live wholly on a *vegetable Diet*; and that they regulate themselves according to the Directions recommended in this Treatise to Persons afflicted with the *Stone*, or *Gout*; and then they may well hope, if not for a Dissolution of every Tumour, yet to recover a good State of Health: But as for *Cancers*, (the most deplorable of all Tumours, by which the natural Figure, and Texture of the component Parts of the Glands affected, is destroyed, and can never be recovered) or the Party free from them, but by *Excision*, when it is practicable, yet suitable Aliment may conduce much to alter that Quality of the Blood on  
which



which they depend, and prevent their Increase; and thereby may promote the Health, and prolong the Lives of such Patients. And here I need only to advise them (besides gradually leaving off *animal Food*, and living according to the Rules proposed to Persons afflicted with the *Stone*) that they daily drink a Quarter, or Half a Pint of *Mallow Gruel* for the more effectual correcting the *cancerous Acrimony* of their Blood.

§. 1441. XII. The SCURVEY is that *saline* State of the animal Fluids, which is manifestly discover'd sometimes by *pustulary* Eruptions, as the *Itch*, *Tetters*, *Impetigo*, and other Sorts of Pimples, or Pustules; or by *Erosions* of the *Epidermis*, as in the *Leprosy*: Sometimes it appears in the covering Membrane of the internal *Superficies*, when there is an Erosion of the *Gums*; or of the covering Membrane of the *Tongue*, by *Aphthæ*, &c. or of the internal *Superficies* of the Cheeks by eating *Ulcers* here and there in it; and sometimes it becomes evident by *flat*, *yellow*, or *livid* SPOTS in the Skin.

§. 1442. These various *cutaneous* Diseases,

(§. 1441.) or different *Species* of the SCURVEY, arising from a Quality of the Blood *too saline*, or too much abounding with *alkaline, animal Salts*, very much need proper *Medicines*; but suitable Aliment will contribute not a little to the Cure of them.

§. 1443. I apprehend, that they (§. 1441.) are chiefly occasion'd by *animal Food, Fish, or Flesh*, which abound much with *animal, alkaline Salts*; and by an insufficient Commi-nution of the saline Particles, when the Action of the Solids has not been sufficiently strong; and by an insufficient Excretion of them, when the Discharge by *insensible Perspiration* has not been so copious as it ought to be, by Reason of the *Coldness*, or *Moisture* of the *Air*: Hence it seems to be, that the SCURVEY is more frequent in the *Northern CLIMATES*, and *ISLANDS*, which are *cold*, and *moist*, than in the *Southern*, which are *warm*, and *dry*; and therefore I recommend the following Rules to the Observance of Persons much afflicted with them, especially if they have the *Leprosy*, or any other *cutaneous* Disease of long standing, *viz.*

§. 1444. Rule 1. *That they use so much Exercise,*



Exercise, as is needful to keep on a plentiful Discharge by Perspiration.

§. 1445. Rule 2. *That they drink freely the small acid Liquors for diluting, or dissolving, and altering the animal alkaline Salts, which occasion the scorbutick Symptoms.*

§. 1446. Rule 3. *That they gradually diminish the Quantity of their animal Food, and in three or four Months come to a total Abstinence from it.* Because this Course will very much cut off those Supplies of Matter, which would increase these Diseases, §. 1441.

§. 1447. Rule 4. *That they prefer those Sorts of Aliments, which have a Quality proper to alter the saline State of the Blood; and therefore, that they use the acid Vegetables.*

§. 1448. APPLES, Limons, and Oranges, are very proper Things for this Purpose. Mr. RAY (a) mentions ORANGES as a Fruit so effectual in curing the Scurvey, that

(a) *Mala Aurantia scorbuto sanando efficacissima esse perhibentur, ut quidam etiam solo esu crudorum diuturno percurrentur.* Vid. Raii Hist. Plant. p. 1660.



several had been thoroughly cured only by a continued Use of them. Many Advantages may be expected by Peoples regulating themselves, and their Diet according to the Directions given in these Papers; but I shall only add in the general, that a due Observance of them may contribute much to the Preservation of Health; to the Cure of many Diseases, to prevent the Ossification of the Arteries, and to render old Age less infirm, than it commonly proves.

§. 1449. I wish those, who shall think fit to regulate their Diet according to the RULES herein contained, would set down in Writing an Account of the *Disorders*, which occasion them to do so, and of the *Time* when they begin their new Method of Diet, and also an Account of the *Eatables*, and *Drinkables* they make use of; and of the *Alterations* that happen to them by Means of it; of the Times when they happen; and if they will send me a Copy of such Accounts, it may be a Help to me in making further Improvements in the important Affair of DIET for human Bodies.

§. 1450. And if they (§. 1449.) will oblige me with such Accounts, and I shall publish  
any

any Thing further on the ADVANTAGES, which may be expected from *Aliments*, and think it proper to insert their Cases, they may be assured, that I will conceal their *Names* and *Places* of Abode, except I have their Leave to mention them.

§. 1451. If any Persons shall become cured of the *Stone*, and *Gout*, by observing the Rules recommended in the foregoing Sections, their Cases will be proper Facts to confirm the *Theoey* of this TREATISE ; and indeed, the communicating any Cases of Benefit received by Means of any Sort of Aliment, may be of great Service to the World, as many useful Inferences may be drawn from them for the Direction of People in the Regulation of their Diet ; and as some of them may happen to be proper Supports of Discoveries that may be further obtained by future Experiments.

§. 1452. If they, who have voided *Stones*, will send them to me for making more Experiments, I shall be obliged to them ; there being many Things remaining proper to be tried, when I can get a sufficient Supply of *Calculi* ; and if they desire it, I will carefully observe what Sorts of Ali-  
ment



ment are most effectual in dissolving the *Calculi* they send ; which Observations may be of singular Service to direct them in the Choice of their Diet.

§. 1453. I have now discoursed on the several Things propos'd to be consider'd in this *Treatise*: And, if it contains any useful Knowledge ; if there be any Discoveries, or *Rules of Diet*, that may prove beneficial to Mankind, I am bound to praise, and thank my God for leading my Mind into the Contemplation of this Subject, and so far directing, and succeeding my Studies upon it ; and herein performing to me, as he has done to *Multitudes* of others, his gracious Promise in *James* i. 5.

§. 1454. *From Thee, O Lord, cometh Wisdom, and thine is the Glory, and I am thy Servant. Blessed art Thou ! and to Thee I give Thanks !* And, now, oh ! my God, I humbly beseech Thee to make the RULES herein recommended, very useful to those, that shall observe them. *Amen.*





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